FEEDSTUFFS

★ A WEEKLY NEWSPAPER ★

FOR THE FEED MANUFACTURER, JOBBER, BROKER and DEALER

Volume 29—Number 29 JULY 20, 1957 1 Year $4, 2 Years $7

Chick Output Down 19% From 1956

WASHINGTON — The production of egg-type chicks during the first six months of this year wound up just about as indicated earlier — down nearly 20% from 1956.

This has meant some reductions in poultry feed volume, but it is, of course, an indicator of the higher egg prices ahead and a better situation for many feed-buying egg producers.

The U.S. Department of Agriculture's latest hatchery report shows that the number of chicks hatched during June for laying flock replacement was 30,962,000—down 11% from a year ago. (A report a month ago on eggs in incubators had indicated that the June hatch would show an increase.)

Output Down 19%

Production of egg-type chicks during the first six months of this year totaled 465,696,000—down 19% from the same period in 1956 as farmers reacted to low egg prices. The main hatching season is over now, and production of egg-type chicks in the next few months will be at the low points in the annual cycle. Thus, any further changes in egg production will have little effect on the over-all picture for the year.

All regions showed decreases in hatch of egg-type chicks during the first half of the year, but there were variations among states and areas. A good share of the over-all decrease occurred in some of the north central states.

Reflecting smaller production of re-

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NUMBER OF CATTLE ON FEED UP 8%

WASHINGTON — The number of cattle and calves on feed for market is up 8% from a year ago. The U.S. Department of Agriculture reported this week that there were 3,681,000 head on feed in 13 major states on July 1, compared with 3,397,000 head a year earlier. The July 1 total was 16% less than the number on feed on April 1—this is less than the usual seasonal decline. As noted by USDA, the increase in total numbers on feed was largely in long-fed cattle, and this increase in long-fed cattle was concentrated in the Corn Belt states. The total number of cattle and calves on feed in nine Corn Belt states was about 2.8 million head—up 7% from a year ago. Both placements on feed and marketings during the April-June quarter were below 1956. The number of cattle on feed on July 1 in four western states was 849,000 head—up 12% from a year ago. Placements were up and marketings down. Further details on the report will appear in next week's Feedstuffs.

AFMA Unit Discusses Poultry Output Problem

CHICAGO — A special 12-man industry committee which was recently formed by the American Feed Manufacturers Assn. to study problems confronting the poultry industry held its first meeting in Chicago July 18.

The meeting was primarily devoted to organization and preliminary discussions on practical ways to encourage constructive action on problems created by the rapidly expanding and changing broiler, turkey and egg industries. It was the feeling of committee members, AFMA officials said, that a strong, voluntary and concerted effort is needed, not only on the part of feed manufacturers and dealers, but of all segments of the poultry industry, to find answers to these problems.

The committee made certain recommendations—including suggestions that the placement of broilers be reduced from present rates and that financing of production facilities for poultry be discouraged for a period of time. (A full statement of the committee appears below.)

Committee members expressed the belief that continued production of poultry and poultry products beyond reasonable consumer demand can result in prices that will be ruinous to all segments of the industry.

Detailed Work to Start

A task force sub-committee has been appointed and charged with the responsibility to immediately start work on detailed recommendations and to present ways and means of organizing and carrying out an effective, vigorous and forceful nationwide campaign to voluntarily bring poultry production into a more realistic balance with anticipated consumer demand. The sub-committee is expected to meet in Chicago in a few days.

The 12 industry men comprising the committee are: Oscar Straube, Pay Way Feed Mills, Kansas City, AFMA board chairman, ex-officio member; H. J. Buist, Allied Mills, Inc., Chicago; Dr. Paul Newman, Beacon Milling Co., Cayuga, N.Y.; W. Cosby Hodges, Cosby-Hodges Milling Co., Birmingham, Ala.; Robert F. McLeod, Chas. M. Cox Co., Boston; D. H. McVey, General Mills, Inc., Minneapolis; Everett Turner, Grange Co., Modesto, Cal.; C. Grattan Lindsey, Jr., Lindsey-Robinson & Co., Roanoke, Va.; Dean McNeal, Pillsbury Mills, Inc., Minneapolis; J. D. Sykes, Ralston Purina Co., St. Louis; J. E. Givens, Southern States Cooperative, Richmond, Va.; L. F. Van Stone, Uncle Johnny Mills, Houston, and Fred N. Rowe, Jr., Valley City Milling Co., Portland, Mich.

At the close of the July 18 meet-

(Continued on page 93)

APHF Rejects Compulsory Controls in Convention Vote

By GEORGE GATES
Editor of Feedstuffs

KANSAS CITY—After an unusually hectic year marked by some severe adjustments in industry operations, hatcherymen and affiliated poultry industry people gathered here this week for their annual look around at products and ideas offered to help individuals and the industry move ahead.

The gathering point was the Kansas City Municipal Auditorium, where close to 4,000 registered for the American Poultry & Hatchery Federation convention. Included in the crowd were many feed men.

While attendance fell somewhat short of expectations, those who were present indicated keen interest in the auditorium—full of exhibits and the educational sessions. It was apparent that hatcherymen, like others affiliated with the poultry business, continue to seek better ways of conducting their business as the No. 1 answer to growing competition, narrower margins and other forms of the economic squeeze.

The feed industry was represented prominently among the exhibits,

(Continued on page 97)

USDA Outlines Details of 1957 Emergency Feed Plan

WASHINGTON — An emergency feed grain program designed to maintain foundation herds of cattle, sheep and goats—similar to programs in effect in previous recent years—was announced recently by the U.S. Department of Agriculture.

The 1956 program expired June 30, and USDA then announced the 1957 program. It is designed to provide feed aid if and when USDA designates areas for such relief in the event of floods, drouth or other emergencies which may arise.

Under the 1957 program, eligible farmers and stockmen in any designated disaster areas may obtain federal assistance amounting to $1 per cwt. in the purchase of feed grains. The grains, used straight or in emergency mixed feeds, must be used for the maintenance of foundation herds of cattle, sheep and goats. The subsidy during the latter part of the 1956 program was $1.50 cwt.

The program, USDA pointed out, is, as before, designed to supply grains for disaster relief through regular trade channels.

Barley, corn, grain sorghums, and oats are the surplus feed grains under the program. Purchase orders issued to eligible participants may be used for the purchase of any of these feed grains as such or in approved feed mixes.

(Continued on page 4)

FEEDSTUFFS *Features This Week*

BROILER TRIAL: Maryland nutritionists report on **page 10** on a recent broiler field trial, in which highly efficient, low-cost gains were obtained.

REDUCING PLANT COSTS: An article on **page 18**—first of a series—tells how an Iowa retail mill has taken steps to improve efficiency, using the Midwest cost standards as a guide.

INTEGRATION: Further remarks on the subject of integration in egg production will be found on **page 22.**

SWINE FEEDING: The use of corn silage, properly supplemented, for pregnant sows is discussed on **page 46.** Baby pig nutrition comes in for attention on **page 66.**

DAIRY NUTRITION: A review by Dr. J. K. Loosli of advances in the nutrition of dairy cows and calves appears on **page 34.**

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Delmarva Broiler Price Continues Slow Rise

SALISBURY, MD.—Broiler prices climbed again last week in the Delmarva area. Prices paid last week averaged 22.37¢ lb. on the farm compared to 22.14¢ the week before.

The price kept climbing in spite of more chickens moving to market. Local growers sent 3,571,000 broilers to market last week—13% more than the previous week and 7% above the corresponding week last year.

Nationwide for 22 reporting states, egg settings totaled 37,451,000 for last week—nearly the same as the previous week, but 9% above the corresponding week a year ago.

Chick placements for the 22 reporting states totaled 28,719,000 or only 1% above the previous week and 9% above the corresponding week a year ago.

Here in the Delmarva area broiler chick placements at 3,792,000 for last week were 1% less than a week earlier but 11% above the corresponding week of last year. Settings at 4,502,000 were 2% more than the previous week and 13% above the corresponding week of 1956.

★ FEEDSTUFFS ★

A Weekly Newspaper Published by
THE MILLER PUBLISHING CO.
2501 WAYZATA BLVD., MINNEAPOLIS, MINN.
(Address Mail to P. O. Box 67, Minneapolis 1, Minn.)
(Telephone: Federal 2-0575. All Offices Serviced by Bell System Teletype)

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Correspondence regarding subscriptions, changes of address, etc., should be sent to Circulation Manager, Feedstuffs, Box 67, Minneapolis 1, Minn. Single copies 20¢. Subscription rates: One year $4, two years $7, in the U.S., U.S. possessions, Canada and Pan-America. Add $2 a year for postage to other countries. Readers are urged to give prompt notice of change of address and to anticipate future changes by at least two weeks' advance notice. Ask postman for form 22-S. Feedstuffs accepts subscriptions only through its own offices; no subscription solicitors are employed or recognized. Associated publications: The Northwestern Miller, The American Baker, Milling Production, Croplife.

Entered as second-class matter Feb. 15, 1947, at the post office at Minneapolis, Minn., under the Act of Mar. 3, 1879

The regional circulation of this issue is concentrated in the northwestern states

The Value of Free Markets

IT is interesting to speculate on what would have happened to livestock and poultry producers—and the feed business—had proponents of strong price support and/or production control programs had their way.

Where would we be if beef and pork purchasing programs had been expanded and continued or if stronger support plans of some type had been established?

What would have happened if a more extensive egg buying program had been set up and continued?

What might have been the result of a program of minimum prices and government production control on broilers?

What would have happened if an even bigger turkey buying program had been carried out?

Where would the dairy farming business be now if supports had been continued indefinitely at high levels?

It is over-simplifying the answer to these questions to refer to the basic commodities, with their high, rigid support programs, as an example of the peck, or bushel, of trouble agriculture can get into with some support programs. However, it is necessary to look at these programs when we consider the possible results if some persons' opinions had prevailed in the most recent periods of price depression for livestock and poultry products.

The farm policy approach followed with the basic commodities hasn't always been too successful in holding up prices. Furthermore, markets have been lost (take cotton, for example), and it has actually been impossible to control production effectively (look at wheat). Also, as a USDA official pointed out in reviewing the effects of a one-dimensional (based on price only) farm policy, the small farmer actually has benefited little.

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AT any rate, contrast the current animal agriculture outlook with the situation in the basic commodities, where there are unmanageable surpluses and lost markets, partly as a result of the failure to adapt farm policy to the technological revolution in agriculture.

There probably will continue to be cyclical ups and downs in production and prices in animal agriculture, but the current situation and outlook are pretty good. The picture would not be nearly so bright for either producers or the feed industry if farmers had become tied up in price and production control programs.

There have, to be sure, been losses in feed volume this season as a result of low egg prices and fewer chicks being raised, but the current outlook is for good egg prices and a happier situation for many steady, stable producers and feed customers.

Both beef and pork production are now pretty much in line with demand, and the price outlook for some time is favorable. Furthermore, there are signs that the hog business is becomeing more stable—more in the hands of professional producers, with fewer in-and-outers.

Broiler prices have recently been at their highest levels for months, and, while the industry probably will run into some more below-cost prices, the current situation is fairly good. If efforts to tighten credit and stabilize production are successful, a brighter long-range outlook is apparent, too.

Some persons attribute the turkey production increase (and prospective lower prices) this year to last year's government buying program and its effect on prices, so here we have an example of what can happen with price-propping efforts. However, it is now apparent that growers are not increasing output to the extent previously indicated, and the present outlook is at least better than it was.

While there probably aren't many dairymen jumping up and down with joy when they view their lot, dairy farming has in recent times brought some more consistent returns than other enterprises. What would be the outlook now if old government programs, with mounting surpluses, had been continued?

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IN some cases, government buying programs have probably helped feed companies avoid losses that they otherwise would have taken because of excess production and low prices. However, it is obvious, the longer range situation is better served when artificial forces are kept out of the picture.

While the basic commodities have suffered from shrinking markets, mounting surpluses and other problems, animal agriculture and the feed industry have gone forward—reducing production costs, expanding markets and generally bringing benefits to both producers and consumers.

It's another lesson in recognizing the value of free markets. Let's not relax our efforts, or vigilance, in helping to maintain free markets and helping producers do a still more efficient and profitable job of meeting the demands of a growing market place. Partners in progress, as opposed to stagnation, will usually reap some rewards.

A FEEDSTUFFS FORMULA FEEDS: HOW'S BUSINESS? FEATURE

A number of bright spots featured the past week's feed business which was not spectacular in volume but nevertheless held steady. Certainly cause for wide optimism was the improved egg price situation. Broiler prices in the Southeast were at a profitable level and feed mill running time there held steady. Hog and cattle prices were good and hog feeds moved well in most sections of the hog producing areas. Turkey feeds sold in good volume, perhaps because of the large number of turkeys. The price situation, however, was not favorable for turkey men. Feed prices went up $1 ton, reflecting increased costs of soybean meal, meat proteins, alfalfa meal and corn. The wholesale feedstuff index number was unchanged from a week ago at 76.6 but was 4.5 points below a year ago. The feed grain index at 74.1 was .7 point under a week earlier and 12.9 points below a year ago. (Ingredient details on pages 94 and 96.)

Southwest

The spottiness so typical of the formula feed business in the Southwest this spring and summer was again the story this week. Some mills experienced a little pickup from last week, others were finding business about the same, and still others reported a slow down. Running time varied from four to five days, with two shifts the most common. Backlogs ranged from nothing up to a couple of days.

Turkeys and hogs continued to account for a pretty good share of the feed volume, the turkeys growing larger and the hog price staying high to encourage good feeding. Poultry rations were about holding their own. Improved egg prices were brightening the layer mash picture, although there has not been any big pickup in business. A little improvement in cattle feed has been noted as the grass has started to feel the mid-summer heat.

Those who have found better feed business believe that the money supply in the area is now improved since wheat harvesting has made good progress.

Prices are expected to be up 50¢ to $1 ton on most rations, although some feeds may be off 50¢. Soybean oil meal strength is mentioned as one of the factors that is causing the price advance.

Northwest

The feed business suffered a slight slow-down compared with the previous week but plants generally maintained two shifts for a 5-day week.

However, there was a tone of optimism in many facets of the feed trade and the picture for the remainder of the summer was considered as not too bad. Egg prices have shown some life, and one report indicated an on-the-farm price of 28-31¢ doz. for grade A. This is 5¢ more than a few weeks ago and follows an upward movement in egg prices in several other sections of the U.S.

Hog and cattle prices continued good and a steady volume of hog feeds was being moved. Dairy feeds, though not moving in great quantity, held up quite well despite continued excellent pasturage available in nearly the entire area.

Turkey feeds sold quite well, but many flocks are rapidly approaching market stage and an inevitable drop-off in this type of feed is likely in a few weeks. The turkey price situation was not bright and one report indicated that hens which are being sold now bring prices under the cost of production.

One manufacturer feels that overall feed production for his plant will increase during the last six months of the year, compared with the same period last year.

Feed prices moved up $1 ton, reflecting increased costs for soybean meal, meat proteins, alfalfa meal and corn.

Southeast

The feed business displayed a better tone during the past week than it has for some time. Prices of broilers and livestock have been advancing and are on the strong side, which is encouraging to feeding operations. Broiler prices were reported to be a firm 21¢ lb. f.o.b. farms, which allowed producers to relize nominal profits over cost. Baby chick placements in the North Georgia producing area were down slightly from the last reporting period. However, there was some concern regarding over-expansion after the next 60 to 90-day period.

Feed mill running time held about steady and purchasing agents for feed manufacturers expanded their buying of some ingredients. A mild rush was experienced in soybean meal purchases delivered into southeastern points this week, primarily due to depletion of inventories and strong soybean meal prices.

Most all major citrus pulp producers were either reported finished for this season or are winding up their operations this week. There was a limited tonnage of citrus pulp being made by some producers on a late season run. However, this was only temporary and is expected to come to an end in the immediate future. Supplies were becoming more scarce and it is expected that this situation will prevail until the new crop becomes available in November. Some areas of the Southeast were reported to be in need of rain. It is still expected however, that the Southeast corn crop will be very good.

New crop cottonseed meal is expected to be available during the latter part of August, with some guessing that new crop meal will be available in 30 days.

Central States

The central states feed business was a little better during the week ending July 17, but still not as good as it was during the same period last year.

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Hearings Indicate Feed Aid Plan Confusion at Top Level

By JOHN CIPPERLY
Feedstuffs Washington Correspondent

WASHINGTON — If the top boss in Washington didn't fully understand the program, how could a local feed dealer in New Mexico know just what he was supposed to be doing?

This question became apparent in connection with Senate Agriculture sub-committee hearings on the drouth emergency feed programs of recent years.

The committee developed an evident condition of poor management of the operation which critics said was centered around the Secretary of Agriculture's office and an immediate assistant.

In a three-day examination of Farmers Home Administration handling of the national and local administration of two drouth feed programs, it became apparent that officials in charge did not have a clear conception of what was going on.

This revelation was regarded as significant since it highlighted the problem of a country dealer trying to distribute grains or mixed feeds to eligible cattlemen who had been approved by local FHA committees.

Kenneth Scott—who reports directly to the Secretary and has in effect a post comparable to that of an assistant secretary of agriculture—was said by a member of the Senate committee to have presented an evasive and uncertain attitude to the subcommittee.

There is some comfort for feed men to be found in the testimony on the workings of and improper actions in the emergency feed program. Testimony adduced here indicated that even top officials in Washington did not seem to know what was intended or what was happening.

This led to the thought that if the top boss here did not know what USDA regulations were all about, how would a local dealer fully understand what he was doing?

New Plans

However, it must be noted that the present director of the Commodity Stabilization Service, Walter C. Berger, had anticipated the condition being exposed in Congress and established a new concept of emergency relief programs — flood or drouth.

Under the new plan, there will be within USDA a "fire brigade" unit which can be shuttled into the field to appraise conditions and make formal, accurate reports to CSS for action.

It may be of interest to the feed industry to know that this unit will be headed up by James Browning and that he has as a staff assistant Kennard Stephens, who has had experience in the feed industry and subsequently in feed pricing problems in the Office of Price Stabilization.

It is now seen that—on the basis of a curious instability of judgment as disclosed in testimony by FHA officials in charge of drouth relief operations — any vague charges against feed dealers of violations of feed programs have little chance of proof if the government decides to move against the dealers.

AID PLAN

(Continued from page 1)

Mixed feeds are classed A and B and must contain at least 75% and 60% by weight of the designated surplus feed grains.

Eligibility to receive assistance under the program will be determined by county Agricultural Stabilization and Conservation (ASC) committees in the disaster area. Application forms for participation may be obtained from the county ASC committee which will determine the extent of assistance to be provided to eligible applicants and will issue purchase orders.

Purchase orders will be used by applicants to obtain the feed grains or approved mixed feeds from an eligible feed dealer. The dealer exchanges the purchase orders at the county ASC office for dealers' certificates. With these certificates, the dealer may buy replacement stocks of grain directly from CCC at the prevailing market price or he can transfer the certificates in his normal business transactions to other persons who may use them for the purchase of designated surplus feed grains from CCC.

Dealer Requirements

Feed dealers who wish to participate in the 1957 program must sign a standard agreement with the ASC office in each county where they distribute feed. This agreement specifies the dealers' responsibilities in the operation. In addition, for the 1957 program, dealers will be required to post performance bonds.

A change in the program this year provides that CCC may limit sales in redemption of dealers' certificates to specified grades of the CCC-owned surplus feed grains and to specified locations of such grains. This would be done only when needed to better manage the CCC inventory.

Since August 1954 and through June 27, 1957, a total of 2,791,057 farmers' purchase orders were issued calling for more than 144 million hundredweight of feed. Dealers' certificates totaling 411,024, valued at about $146,278,000, have been issued to cover these orders. Through June 27, approximately 41 million hundredweight of corn (73.2 million bushels), 1.6 million hundredweight of barley (3.3 million bushels), 3.2 million hundredweight of oats (10.1 million bushels), and 34.2 million hundredweight of grain sorghums have come from CCC stocks to redeem dealers' certificates.

Louisiana Flood Areas First to Get Feed Aid Under New Program

WASHINGTON—The U.S. Department of Agriculture this week announced that flood areas in Louisiana have been designated as eligible to receive assistance under the 1957 emergency feed program. This was the first designation under the program. (See accompanying story on the 1957 program.)

Under the emergency feed program, eligible farmers may obtain federal assistance of $1 cwt. in the purchase of feed grains for maintenance of foundation herds.

Areas of the state designated for the 1957 emergency feed program are: Avoyelles Parish, wards one and two; Bossier Parish, wards one, two and three; Caddo Parish, wards one, eight and nine; Catahoula Parish, wards three, four, five, six and seven; Grant Parish, wards one, two, six and seven; La Salle Parish, wards four, five and six; Natchitoches Parish, wards one, three, four, five, nine and ten; Rapides Parish, wards two, seven, eight, nine, ten and eleven; Red River Parish, wards one, seven and eight; and Winn Parish, ward five.

Texas, N. M. Drouth Areas to Get Aid

WASHINGTON—Because of continued drouth conditions, four counties in Texas and 10 in New Mexico have been designated as eligible to receive assistance under the 1957 emergency feed program, the U.S. Department of Agriculture announced this week.

Under the program (which is similar to the 1956 relief program), eligible farmers may obtain feed grains at a reduction in price of $1 cwt. As previously, dealers will sell the grains straight or in the form of emergency mixed feed. The feed must be used for maintenance of foundation herds of cattle, sheep and goats.

The designated counties are:

Texas—Culberson, Hudspeth, Jeff Davis and Presidio.

New Mexico—Grant, Hidalgo, Socorro, Sierra, Luna, Dona Ana, Lincoln, Otero, Chavez and Eddy.

Applications for assistance may be filed with county ASC committees through Aug. 30 for supplies of feed grains sufficient to carry eligible livestock through Sept. 30.

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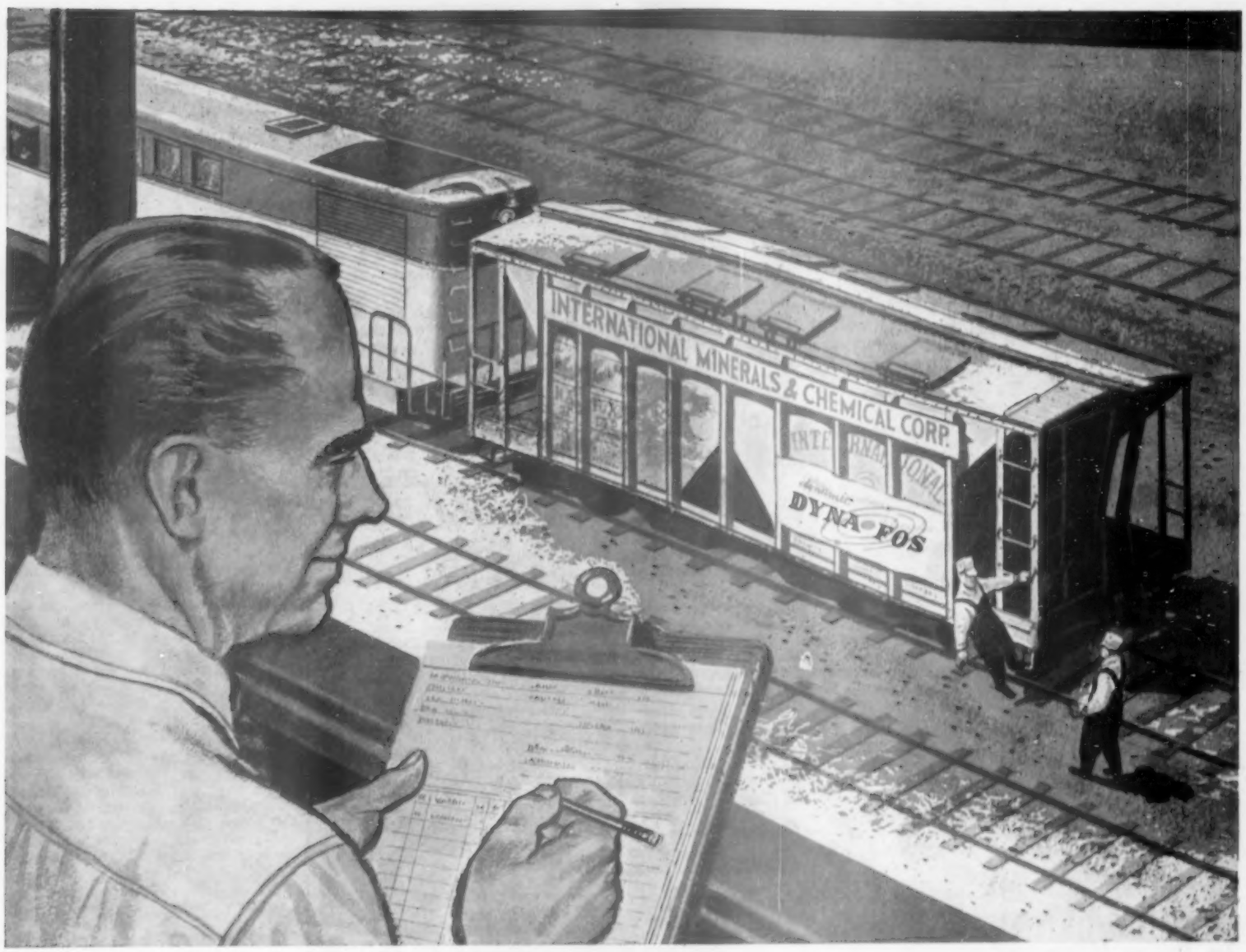

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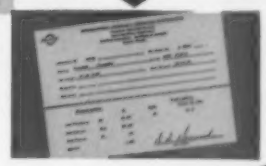

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It's not an idle boast! Your order for Dynamic DYNAFOS is delivered when you want it . . . whatever your location. International's streamlined production and shipping facilities make dependable delivery a reality. Important too: The Bonnie plant produces dicalcium phosphate *solely for the feed industry* . . . keeps pace with your needs. And free-flowing, granular DYNAFOS bulk ships without packing, reduces dust problems and makes mechanical handling easy. If you are not already using International's Dynamic DYNAFOS, write or phone your nearest sales agent for samples, quotations and future bookings.

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Turkey Hatch Trails '56 Level At Season's End

WASHINGTON—The 1957 turkey crop will exceed the record total of some 77 million birds in 1956, but the increase will not be by so much as had been indicated earlier.

The U.S. Department of Agriculture's latest hatchery report showed that hatchery production of poults dropped below levels of a year earlier as the main hatching season ended.

For the first six months of the year, production of all breeds of poults was 3% larger than a year earlier.

Meanwhile, continuing large storage stocks of turkeys have tended to be a depressing factor in the turkey price situation.

Total production of heavy breed poults in June was 10,575,000—down 3% from a year earlier. Output of heavy white breed poults was about 2.6 million, representing a drop of 7%. Production of other heavy breeds was 7,962,000, or about 2% less than a year earlier.

For the first six months of the year, heavy white breed output was down 10%, while output of other heavy breeds was up 8%. For all heavy breeds, the poult total was 65,280,000 —up 4% from a year earlier.

A July hatch of heavy breed poults somewhat smaller than in July last year was indicated as the number of eggs in incubators on July 1 was off from a year ago.

Production of light breed poults in June totaled 2,176,000—a decrease of 11%. A smaller July hatch also was indicated. Production of light breed poults in the January-June period was about 8.8 million—down 4% from last year.

New Feed Plant In Iowa Planned

EAGLE GROVE, IOWA — The Boone Valley Cooperative Processing Co. has announced plans for a $500,000 feed manufacturing plant here.

Ed Olson, manager, said that a contract has been let to the Younglove Construction Co., Sioux City, Iowa, for construction of the plant.

The new facilities will be adjacent to the present plant and will increase production by 2½ times, Mr. Olson said. The new plant is expected to be completed by November.

Mr. Olson said all feed will be mixed with an automatic system. Bulk materials, he said, will be moved pneumatically.

With the new equipment, the firm is expected to be able to process 336 tons of formula feed in eight hours.

Myers-Sherman Co. Holds Sales Meeting

STREATOR, ILL. — The Myers-Sherman Co. introduced and demonstrated new products to its distributors from across the U.S. at the 3-day annual spring sales conference held here.

Shown were the new Ford's "Airmatic" hammer mill and the new pneumatic "GrainVayor" as well as other developments in the firm's feed milling equipment.

The meeting was conducted by C. Robert Myers, president; John B. Myers, vice president and treasurer; Lester Hendrickson, vice president and sales manager of the portable division; Dan Keller, sales manager of the stationary division; Harold Stevens, chief engineer; William Pusey, product design engineer; and R. H. Meyers in charge of customer service and purchasing.

Special tribute was paid to Mrs. Leila Sherman, chairman of the board, and E. G. Myers, vice president and one of the company's founders.

Nichols Announces New Male Line For Broiler Industry

KANSAS CITY — Announcements of a new male line for the broiler industry was made by Nichols, Inc., Exeter, N. H., at a special dinner meeting of customers preceding the opening of the American Poultry & Hatchery Federation convention in Kansas City July 15.

J. S. Higgins, Nichols general manager, stated that the new 909 male would be in production in one year. He described the 909 as a dominant white, pure silver bird which would produce all white broiler chicks. It has been developed to go with the new Nichols 108 female line.

Mr. Higgins said that Nichols is departing from its policy of strictly female replacement stock in order to coordinate the PPLO elimination program in both male and female breeding lines, and to offer males whose combinability with the females had been predetermined.

At the same time, Nichols announced its new 108 female line which will be in full production in November, replacing the current No. 12 crossbred line.

The 108 is a dominant white, crossbred female, the result of controlled matings of new, synthetic strains developed at the Nichols' Coleman Research Farm, Brunswick, Maine, where the 909 males also originated.

The 108 carries a pure white undercolor, no black feathers, and a distinctive pattern of buff and light red on some of the feather tips. Company officials said it is rated even with the No. 12 at the flockowner and hatchery levels, and superior at the grower, feeder and processor levels.

The 108 replacement chicks feature auto sexing at day old—the cockerels being pure white. Offspring of the 108 pullets when mated with currently available white male lines carry a higher degree of whiteness that has been experienced in existing white cross chicks, according to Mr. Nichols.

The 108 females and the 909 males will not be merchandised as a package deal, Mr. Nichols emphasized.

Mrs. Ralph Field Dies

SANTA MONICA, CALIF. — The wife of Ralph M. Field, former president of the American Feed Manufacturers Assn., Chicago, died here July 9. Mrs. Marion D. Field was 80 years old, and would have celebrated 57 years of marriage in a few months. She has been ill for around two years. Mr. Field became secretary of the AFMA in 1933, and was made president in 1937. He retired in 1947. His address now is 344 Fourteenth St., Santa Monica, Cal.

RAINS HAMPER CHICAGO AREA FEED PLANTS

CHICAGO — The rains which poured down more than six inches of water here on July 12 and 13 caused the loss of some running time and inconvenience to several Chicago area feed mills. The Arcady Farms Milling Co. was to run at about 50% capacity until July 20 when a generator, which was struck by lightning, could be repaired. Some water also got into the plant. The Hales & Hunter Co. plant had water in the basement and some wet motors. Elevator legs were flooded, and pumping was done over last weekend. The plant was in operating condition by the start of the regular work week July 15, and elevators were operating by the next day. The Farm Bureau Milling Co., Hammond, suffered delays and inconvenience on some construction work going on at the plant.

Norman E. Dewes Named President Of Pro-Vid-All

LITCHFIELD, MINN. — Paul R. Held, chairman of the board, Pro-Vid-All Mills, Inc., Litchfield, Minn., has announced the election of Norman E. Dewes as president, effective July 15. Mr. Held had been president of the company.

Norman E. Dewes

Mr. Dewes resigned as sales manager, north Central region General Mills, Inc., feed division, in June after being with the firm for 23 years.

The Pro-Vid-All firm formerly was known as the Hilltop Farm Feed Co., which was formed after Mr. Held purchased controlling interest in the Farm Feed Manufacturing Co., Litchfield, in April. Mr. Held had been owner of the original Hilltop feed company in Minneapolis, a firm whose feed manufacturing operations at Minneapolis were terminated on May 1.

Pro-Vid-All feed manufacturing operations are being concentrated at Litchfield from where distribution is being made in bag or bulk to its customers.

COMPLETE STORAGE BINS

HARTSBURG, ILL. — The Hartsburg Grain, Coal & Lumber Co. recently completed erection of two 40 by 100 ft. quonset storage bins each with a capacity of 55,000 bu. They are equipped with Hot Spot detectors and aeration systems.

GEORGIA CELEBRATION—Cherokee County, Georgia, advertises itself as the "oldest and largest broiler producing county in Georgia," and helping the county celebrate its first poultry festival are the four persons in the picture here. They are, from the left: Mrs. Bill Groover, wife of the manager of the Red Hat Feed Mills plant at Tunnel Hill, Ga.; Avanelle Lycan, Atlanta, who is Miss Georgia Chick; Leland Bagwell, Canton, Ga., president, Southeastern Poultry & Egg Assn.; and Mrs. Ralph Lawson, wife of the president of the Cherokee County Feed Dealers Assn. Cherokee County feed men, in cooperation with the Canton Junior Chamber of Commerce, sponsored the poultry festival attended by more than 2,500 persons. Phil Campbell, Georgia commissioner of agriculture, was the main speaker.

Hearing on Grain Rate Complaint Held in K. C.

KANSAS CITY — An Interstate Commerce Commission hearing on a complaint about grain rates filed by the Southeastern Association of Railroad Utilities Commissions upon the suggestion of the Southern Governors Conference against the Atchison, Topeka & Santa Fe Railroad was held here the week of July 15.

Included in the complaint are several others of similar nature filed by grain exchanges, cities and companies against railroads serving the Southeast. The case of the Kansas City Board of Trade vs. the Atchison, Topeka & Santa Fe Railroad is among these.

Clarence H. Noah, Raleigh, N. C., traffic director for the North Carolina Utilities Commission, is representing the interests of North Carolina, the Southern Governors Conference and the Southeastern Association of Railroads & Utilities Commissions.

"The complaint," Mr. Noah said, "assails the freight rates on grain and grain products in carload quantities, first, within the South, and second, between points in the South and other territories in the nation. Our position is that rates on these commodities within the South are more than 40% higher than rates within the territory north of us.

"We are entitled to a level of rates approximating the rates in territories north of us. We also take the position that one factor rates should be prescribed on the traffic between the South and other territories."

Walter Scott, executive vice president of the Kansas City Board of Trade, said that rates on grain and grain products in the territory Kansas City serves are unreasonably high.

The counsel for the Central, Western and Southwestern Railroads is James M. Souby, Jr., Chicago. He said that the railroads' position is that the rates are fair and moving large quantities of traffic.

"On the other hand, we realize shippers have problems, particularly with respect to unregulated transportation," he said. "We prefer to negotiate among ourselves without litigation before the ICC."

Such negotiations, Mr. Souby pointed out, recently resulted in sharp reductions on coarse grains to the Southwest through the Kansas City market.

Oregon Feed Man Retires from Post

ASTORIA, ORE. — C. A. Fertig, manager of the Lower Columbia Dairy Cooperative here, resigned from his duties July 1 following 29 years of service. He immediately began laying plans for an extensive travel schedule.

A longtime Clatsop county resident, Mr. Fertig organized the feed department in 1928 and managed it until his retirement. Friends and well-wishers held a series of parties for the retiring official both at the feed department office and at company headquarters.

During his long career Mr. Fertig has also been affiliated with various feed organization and is an active member of the Oregon Feed & Seed Dealers Assn.

New Egg Grading Law Approved for Illinois

SPRINGFIELD, ILL. — Governor Stratton signed into Illinois law recently a bill authorizing the state agriculture department to set up graded egg standards.

The measure was sponsored in the legislature by Rep. John K. Morris, Chadwick, Ill.

Terminal Merchants Assn. Opposes Bushel to Hundredweight Change

KANSAS CITY—Strong opposition to any change from bushel to hundredweight basis of trading in grain was voiced by the Terminal Elevator Grain Merchants Assn. in a statement of policy issued by Frank A. Theis, Simonds-Shields-Theis Grain Co., Kansas City, who is president of the group.

The policy, adopted at the recent annual meeting in Minneapolis, lays particular stress on the volume characteristics of the bushel measurement and the grain storage difficulties that would be encountered in any abolition of this standard.

The policy statement is as follows:

"The Terminal Elevator Grain Merchants Assn., whose members operate most of the terminal elevator capacity in the U.S., definitely and vigorously opposes changing from the 'bushel' system to the 'hundredweight' system.

"A USDA news release of April 26, 1957, announcing the report on the study of 'Cwt. vs. Bu.' (Marketing Research Report No. 168), contained the following statement: 'There was general agreement that the advantages would be lasting, while the disadvantages would disappear after a period of adjustment.' We take issue with this statement. The action taken by the Board of Directors of the Terminal Elevator Grain Merchants Assn. definitely shows that this important segment of the grain trade is not in 'general agreement' with the change to 'hundredweight.' We are of the opinion that the disadvantages of handling and storing grain on a 'hundredweight' basis would be lasting and would far outweigh the advantages.

"The bushel is two things—a measure of volume and a measure of weight. The 'volume' bushel is defined in the dictionary as a dry measure containing 2150.42 cu. in. The 'weight' bushel has been so designated by the U.S. government in establishing the per bushel weights of grain—wheat, 60 lb.; barley, 48 lb.; oats, 32 lb., and rye and corn, 56 lb.

"A bushel of grain at the specified test weight will occupy approximately a bushel of space. Changes in test weight will cause slight variations in the amount of space grain will occupy. Thus, even taking into consideration the variations caused by test weight, there is a close correlation between bushels and space requirements, regardless of what grain is being considered. In other words, the bushel is the common denominator for all grains.

"A 'hundredweight' is a measure of weight only and has no relation to volume. Since elevator operation is essentially a volume business we must object as vigorously as possible to all attempts to change from the 'bushel' system, which gives us both volume and weight, to a 'hundredweight' system which gives us weight only.

"An elevator has a definite volume capacity or storage space. Space is essentially what an elevator operator is selling when he issues a storage receipt. The use of the 'bushel' in handling and storing grain facilitates charging the same amount for a given amount of space whether the space is used for wheat or corn or oats. Use of the 'bushel' also facilitates figuring storage requirements and available capacities."

OPENS FEED STORE

CEDAR RAPIDS, IOWA — A new feed store has been opened here by W. A. Beasley.

Millfeed Production Shows Increase

Production of millfeed in tons for week ending July 12, and prior two weeks, together with season total of (1) principal mills in Nebraska, Kansas and Oklahoma and the cities of Kansas City and St. Joseph, (2) principal mills of Minnesota, Iowa, North and South Dakota and Montana, including Minneapolis, St. Paul and Duluth-Superior; (3) mills of Buffalo, N.Y. Production computed on the basis of 72% flour production.

	Southwest*		Northwest*		Buffalo†		Combined**	
	Weekly production	Crop year to date	Weekly production	Crop year to date	Weekly production	Crop year to date	Weekly production	Crop yr. to date
July 8-12	25,557	46,221	12,954	23,674	9,654	18,986	48,165	88,881
Prev. week	‡20,664		‡10,720		9,332		‡40,716	
2 weeks ago	25,167		14,359		11,075		50,601	
1956	24,030	45,338	11,564	21,551	9,443	18,349	45,037	85,238
1955	24,249	51,648	10,648	22,386	10,019	20,249	45,016	94,283
1954	25,656	55,661	10,317	24,359	10,864	23,588	46,837	103,608
1953	22,766	48,759	13,164	33,240	5,513	20,401	41,443	112,400

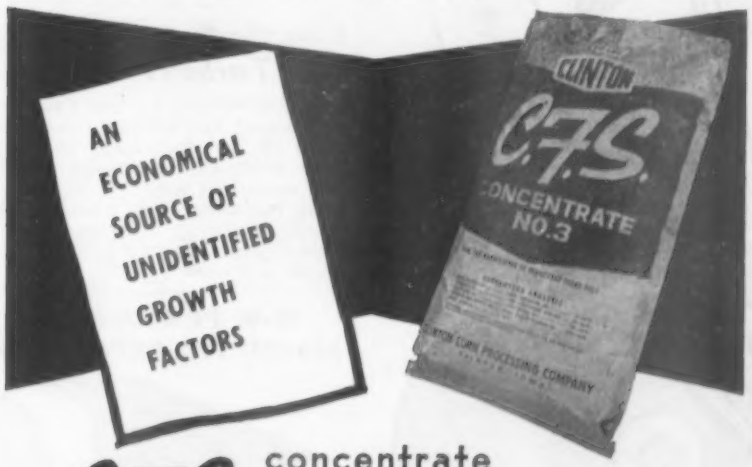
*Principal mills. **75% of total capacity. †All mills. ‡Revised.

Pratt Food Co. Moves To Junction City, Ky.

JUNCTION CITY, KY.—The Pratt Food Co., formerly headquartered at Hammond, Ind., is moving its animal health product manufacturing facilities to Junction City, Ky., 40 miles south of Lexington.

Entirely new facilities for research and manufacture in a modern laboratory and plant have been completed. Company officials said that several new products, as well as those formerly manufactured, will be produced in the new plant.

R. H. Shanaman, president of Pratt, said: "Our move out of a congested district to Junction City will locate us in the center of our marketing area which offers many advantages to our dealers and their customers." He added that the new location will make it easier to farm-test products near the plant under the close supervision of technical personnel.



C.F.S.#3 concentrate

corn fermentation solubles – for poultry and swine feeds

You can partially replace or eliminate more costly sources of unidentified growth factors and other important nutrients. Lower-cost Clinton C.F.S. Concentrate #3 is a free-flowing blend of corn fermentation solubles dried on nutritious corn by-products. It's exceptionally potent in organic and inorganic growth factors, important B vitamins and quality proteins. Ideal for modern high-efficiency rations and for manufacturing registered feeds. For you, C.F.S. Concentrate #3 means more profit. For the feeder, improved growth and higher feed efficiency.

Quality products *Write for full details*

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CLINTON CORN PROCESSING COMPANY
CLINTON, IOWA

F – Fast Service
R – Reliability
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Fruen's

The name "FRUEN'S" itself spells out six important factors that for more than sixty-two years have made Fruen's your best source for grain ingredients.

Send for samples and prices today

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TOWER BRAND ROLLED OATS (Steam processed)
ACE BRAND ROLLED OATS (Steam processed)
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STEEL CUT OAT GROATS
BOLTED OAT FLOUR
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FALCON BRAND PULVERIZED WHITE OATS
STANDARD BRAND PULVERIZED WHITE OATS
DAIRY BRAND COARSE GROUND OATS
CRESCENT BRAND PULVERIZED OATS
CORN OATS PELLETS (Corn-Oats)
MIXERS' PULVERIZED OATS
MIXERS' COARSE GROUND WHITE OATS
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STEAM ROLLED WHOLE BARLEY
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ACME GROUND DOMESTIC FLAX SCREENINGS

If you want pelleted and crumblized formula feeds under your private label, write us for details.

Millers TO THE FEED TRADE

FRUEN MILLING COMPANY
MINNEAPOLIS 5, MINNESOTA

Broiler Prices at Highest Levels Of Year to Date

WASHINGTON—Broiler prices recently have been the highest of the year to date, with seasonably strong consumer demand sustaining prices.

This was pointed out by the U.S. Department of Agriculture in a report on the poultry situation.

Meanwhile, a federal-state market news service report early this week showed broiler prices at the farm at levels of 21 or 22¢ lb. or higher, depending on the area.

USDA noted that placements were continuing above a year earlier, and, the agency said, since demand will be weakening seasonally by the time these broilers are marketed, some decline in prices from present levels is likely in the fall.

In addition to the demand factor, broiler prices may be helped by a reduced supply this season of by-product cockerels raised with pullets for replacement layers.

Another USDA report this week—on hatchery production—indicated that the number of broiler-type chicks hatched during June was 138,459,000—up just slightly from a year earlier. A July hatch slightly larger than in July last year was indicated as the number of broiler-type eggs in incubators on July 1 was 5% larger than a year earlier.

FEED MAN DIES

CINCINNATI, OHIO—Services for Raymond Fricke, 64, a partner in the John H. Fricke Sons feed and seed company, were held recently. He died following a short illness. The business was started nearly 100 years ago by his father. Surviving are his widow and three brothers.

Rain Making Group Gets Back Into Action

ST. JOSEPH—County chairmen in northwest Missouri and northeast Kansas have voted to have the Krick Weather Service firm resume cloud-seeding in this two-state area.

The county chairmen, representatives on the board of the Midland Empire Weather Modification Assn., previously voted to discontinue operations during the wheat and oat harvest. The change came because of a lack of rain in recent weeks.

The Krick forecast calls for good rain possibilities the remaining weeks of the month.

Rainfall here to date has been 15.60 inches, a deficiency of 4.25 inches.

The Weather Modification Assn. was formed here through the efforts of feed dealers in the area.

OPEN NEW MILL

STATE CENTER, IOWA—Shortley Elevator Co. recently held open house to celebrate completion of a mill at the elevator. A wooden frame building with sheet metal covering, the new mill will house a 50 h. p. grinder, two mixers and six holding bins.

Slow Start for Menhaden Catch; Pickup Possible

WASHINGTON — U.S. production of menhaden for the first five months of 1957 is 16,300 tons, down about one third from the 24,800 tons of the corresponding period a year earlier, according to the U.S. Fish & Wildlife Service.

May usually marks the beginning of the menhaden season, which reaches its peak during June, July and August, tapering off in September and October. Fish meal industry leaders point out that while the catch appears to be down so far this season, the situation can change in a week or two. Observers of menhaden fishing for many years state that many years have started slow and ended up with bountiful catches.

The U.S. and Alaska production of menhaden meal and scrap in 1956 totaled 210,500 tons.

The bulk of domestic menhaden is caught off the mid-Atlantic Coast. The next biggest source is the Gulf. One industry spokesman said that fishing in the north Atlantic was "not bad at all to date." Some reports from menhaden processors along the Gulf, however, indicated that the catch is up to 50% below last year and it was felt that the recent hurricane, Audrey, may be mainly to blame. In many cases Gulf menhaden were available but power facilities had been knocked out by the storm, making it impossible for firms to process the fish.

The menhaden meal price situation has not been affected much—if any—by the slow start in the menhaden catch. Comparatively low prices of vegetable and animal proteins and their plentiful supply, as well as sizeable imports of fish meal have tended to maintain a balanced price relationship, market observers say.

Canada Puts Curbs on U.S. Turkey Imports

WASHINGTON — The Canadian government has moved to curb imports of U.S. turkeys by imposing strict tariffs effective immediately, it was announced here.

At the same time, Canadian officials announced a domestic price support program for turkeys produced in Canada.

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Product on the Market...

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• MORE SUGAR, MORE SWEETNESS
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You'll make more money on Omalass. It's easier to sell because it's the original and best known brand. It's the tops in quality and it's backed by continuous advertising.

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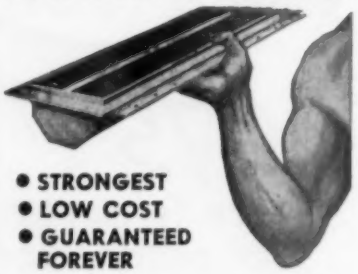
W-W PERMANENT MAGNETIC SEPARATOR



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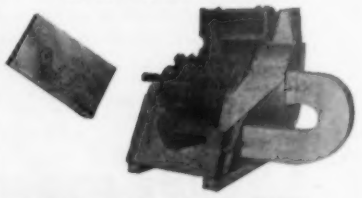
• LOW COST
• GUARANTEED FOREVER
30% more pull than with any comparable magnets. Equipped with Alnico V units . . . protective casing. Available hinged or plain . . . 48-hour shipment.

W-W HAMMERMILLS



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W-W hammers, the original hard-surfaced hammers, have Tungsten Carbide cutting edges which last for entire life of the hammers — many times longer than any other hammer.

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In new granular form, Coronet DIKAL handles conveniently in both bagged and bulk shipments... flows freely in all types of mixing equipment and eliminates annoying dust. Its particle size maintains dispersion by similarity to other feed components.

GUARANTEED UNIFORM ANALYSIS

PHOSPHORUS	CALCIUM	FLUORINE	pH
19.00% min.	25.00% min. 28.00% max.	0.11% max.	5.0 to 6.0

Screen Analysis: All through 20 mesh; 80% to 90% on 200 mesh

Let us figure the cost of Granular DIKAL delivered to your plant

DIKAL
CORONET DICALCIUM PHOSPHATE

DIKAL is produced by Texas City Chemicals, Inc., under the management of

Coronet Phosphate Company

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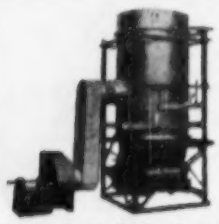
A DIVISION OF SMITH-DOUGLASS COMPANY, INCORPORATED

Helm PELLET MILL

HIGHER PELLETING PROFITS WITH THESE FEATURES

- **Greater Capacity**
  The new HELM JUMBO MODEL 100 and JUMBO MODEL 60 give you increased pellet capacity, from poultry to cattle sizes.
- **Higher Quality Pellets**
  Firm, glossy pellets are an inherent feature of the HELM JUMBO MODEL 100 and JUMBO MODEL 60.
- **Economy of Operation**
  The high capacity of these mills gives the utmost in economy of operation.
- **Controlled Pellet Length**
  A special feature of the HELM JUMBO 100 and JUMBO MODEL 60 is positive length control on all pellet sizes.
  In both machines, knives mounted on a turntable are used against die. Desired length of pellets can be gained by varying speed of turntable.
- **Ease of Operation**
  This custom designed mill has controls arranged to be easily operated from one position. The HELM JUMBO MODEL 100 and JUMBO MODEL 60 can be operated by your untrained men.
- **Lowest Maintenance Cost . . .** The use of special metals and heavy duty anti-friction bearings throughout the HELM JUMBO MODEL 100 and the JUMBO MODEL 60 assures the lowest of maintenance costs.

The HELM JUMBO MODEL 100 and the MODEL 60 are engineered to give you maximum efficiency. The only major difference between the machines is their size, the JUMBO MODEL 100 having the greater capacity.



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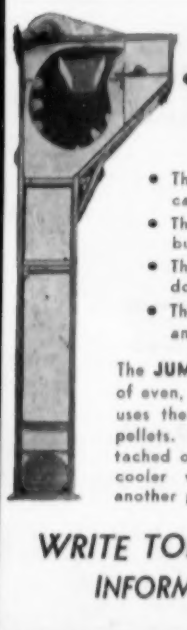
The Answer to Your Problems for Perfect Pellet Cooling

● **DESIGN**—Framing, Angle iron and pipe. Body of unit is perforated metal. Inside the unit is a perforated stack, reduced at the lower end allowing free flow of pellets. It has a 12 inch space for pellets up and down the entire length of unit allowing fan to breathe through a 12 inch thickness of pellets. Holding Capacity approx. twenty-three 100 lb. bags. The larger unit approx. thirty-five 100 lb. bags.
● **OPERATION**—When the scale beam is tipped, a mercury switch starts the small motor which operates the shaker. When the beam drops back, the switch cuts off the motor.

NEW FEATURES FOR TROUBLE-FREE OPERATION

We manufacture three types of coolers. Our latest type, as shown above, can be used as a steady stream of pellets going to the automatic scale. It has a special unique feature to assist the operator when sacking directly from the cooler. (Previously, many various controls have been used to allow a limited flow to the sacks, but have not given a uniform flow. The flow will be too heavy at intervals and too light at intervals. Where 25 to 50 lb. bags are being used, the flow is too great unless you have sufficient height to use hoppers.) The unique feature of this Helm cooler is a scale arrangement and the amount of material coming through the cooler can be regulated by moving the weight on the scale, which allows it to cut off within one to two pounds of the given amount desired. For illustration, it can be set for 25 lbs., 50 lbs., 100 lbs., or any desired amount. This is a most desirable feature, for not only does it not slug the operator, but if the material is going to a crumbler, it will not slug the crumbler.



Helm INTERNAL BUCKET ELEVATOR

The Helm Internal Bucket Elevators are designed to complement the Jumbo Model 100 and Model 60, but will work fine with others

- This lift differs considerably from the standard lift, commonly called a bucket elevator.
- The elevator is designed with two cables and a belt. The buckets are placed on the inside of the belts.
- The buckets gently discharge the pellets by turning upside down. The pellets fall on an angle chute and roll into the cooler.
- The **HELM INTERNAL BUCKET ELEVATOR** is equipped with anti-friction bearings throughout.

The **JUMBO MODEL 100** and **MODEL 60** are built to deliver pellets of even, controlled length. The **HELM INTERNAL BUCKET ELEVATOR** uses the internal bucket system to prevent breakage of the warm pellets. In this system, the buckets are attached on the inside of the belt. By using our cooler with wire traveling belt you gain another protection against broken pellets.

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Broiler Field Trial Involving High-Fat Rations Completed

● **By G. F. Combs, G. L. Romoser and J. L. Nicholson**
University of Maryland

EDITOR'S NOTE: Broilers were produced on as little as 1.86 lb. of feed per pound of bird in a recently completed eight-week field trial at the University of Maryland Substation at Salisbury. Various levels of added fat, ranging up to 18%, were used in the feeds in this trial. The researchers said that it is obvious that a feed containing 18% added fat is not practical for present handling methods. But, they said, results "strongly suggest that the use of fat levels up to 10% in non-pelleted starting feeds up to three weeks should be considered." In the accompanying article, the Maryland researchers report and comment on the recent and previous field trials.

v v

An eight-week field broiler trial involving 16 pens of 400 Vantress White crossbred broilers each (both sexes) was completed at the University of Maryland Substation, Salisbury, on June 21. Despite hot weather during the last 10 days of this trial, the average weights and feed conversions ranged from 2.71 to 2.86 lb. and 1.86 to 2.22 lb. of feed per pound of live weight, respectively. The cost of feed required per pound of broiler produced varied from 8.52¢ to 9.92¢ for the treatments employed.

This trial, S-19, involved the use of feeds containing three widely different levels of added hydrolyzed animal and vegetable fat. Four pens of broilers received a pelleted starting feed which contained 2% added fat; a second series of pens received a starting mash which contained 10% added fat. A third series of four pens received a starting mash which contained 18% added fat. The total fat content of this feed was approximately 20.5%. The fourth series of pens was allowed to select free-choice either the pelleted ration containing 2% added fat or the mash containing 18% added fat. After six weeks, finishing feeds were used.

These finisher rations were made simply by adding 500, 550 or 600 lb. of ground yellow corn to a ton of the 2%, 10% or 18% added fat ration, respectively. In addition, some additional choline and salt were added. The starter feeds contained from 982 to 1,208 Calories of productive energy per pound for the low and high fat rations, respectively, with a calorie-protein ratio of approximately 42:1. The finisher feeds contained from 1,014 to 1,188 Calories of productive energy per pound with calorie-protein ratios of approximately 50:1. The highest protein level used in the starting feeds was 28.6% for the high fat diets, compared with 23.1% for the low fat diets.

Within each series of four pens which received different levels of added fat in the ration or a choice of two rations, the feeds varied with regard to the animal protein or amino acid supplementation. One pen in each series received poultry by-products meal as the sole animal protein supplement plus MHA (methionine hydroxy analogue) whereas the second pen received poultry by-products meal, meat scraps and MHA. A third pen received poultry by-products meal, meat scraps, hydrolyzed feathers and MHA. The ration fed to the fourth pen of each series was similar to that fed to the third pen in that it contained the same level of all other nutrients including poultry by-products meal, meat scraps and hydrolyzed feathers but the MHA (methionine hydroxy analogue) was omitted.

The results of the preceding trial (S-18) with similar diets indicated that a combination of meat scraps, poultry by-products meal and hydrolyzed feathers gave comparable results as obtained with rations containing fish meal and that the rations

(Continued on page 14)

Table A. Composition of Starting Rations (Broiler Trial #19)
Completed June 21, 1957, Md. Agr. Expt. Sta., Salisbury, Maryland

Ingredient	2% Fat Series				10% Fat Series				18% Fat Series			
	A-1	A-2	A-3	A-4	B-1	B-2	B-3	B-4	C-1	C-2	C-3	C-4
	Pounds per ton											
Ground yellow corn	1169.8	1163.8	1172.5	1174	835	844.25	862.4	864	499.6	524.7	552.3	554
Stabilized fat 1/	40	40	40	40	200	200	200	200	360	360	360	360
Meat and bone scrap, 50% prot.	-	75	75	75	-	100	100	100	-	125	125	125
Poultry by-products meal	150	75	75	75	175	75	75	75	200	75	75	75
Hydrolyzed poultry feathers	-	-	50	50	-	-	62.5	62.5	-	-	75	75
Soybean meal, 50% protein	140	140	140	140	535	547.5	466	465	630	635	530	530
Corn gluten meal	75	75	75	75	112.5	112.5	112.5	112.5	150	150	150	150
Dehy. alfalfa meal, 20% prot. (100,000 IU A/lb.)	25	25	25	25	32.5	32.5	32.5	32.5	40	40	40	40
Dried corn distillers' sol.	40	40	40	40	45	45	45	45	50	50	50	50
Limestone	25	20	20	20	25	15.5	15.5	15.5	25	11	11	11
Di-calcium phosphate	25	15	15	15	27.5	13.5	14	14	30	12	13	13
Salt, iodized	6	6	6	6	6.5	6.5	6.5	6.5	7	7	7	7
Trace mineral mix (Delasia)	2	2	2	2	2	2	2	2	2	2	2	2
Choline chloride, 25% mix	-	1	2	2	2	3.5	4.5	4.5	4	6	7	7
Methionine hydroxy analogue, Ca salt	1.2	1.2	1.5	-	1.3	1.25	1.6	-	1.4	1.3	1.7	-
Choline chloride, 100% 2/	.25	.25	.25	.25	.25	.25	.25	.25	.25	.25	.25	.25
Butylated hydroxytoluene 2/	.25	.25	.25	.25	.25	.25	.25	.25	.25	.25	.25	.25
Arsanilic acid, 100% 2/	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2
	Amount per ton											
Riboflavin, gms. 2/	3	3	3	3	3	3	3	3	3	3	3	3
Ca pantothenate, gms. 2/	10	10	10	10	10	10	10	10	10	10	10	10
Niacin, gms. 2/	30	30	30	30	30	30	30	30	30	30	30	30
Vitamin A, million IU 2/	3	3	3	3	3	3	3	3	3	3	3	3
Vitamin D_3, million IU 2/	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8
Vitamin B_{12}, mg. 2/	8	8	8	8	8	8	8	8	8	8	8	8
Menadione sodium bisulfite, gm.2/	1	1	1	1	1	1	1	1	1	1	1	1
Vitamin E acetate, IU 2/	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
Nicarbazin, 100%, lb. 2/	.25	.25	.25	.25	.25	.25	.25	.25	.25	.25	.25	.25
Zn bacitracin, gm. 2/	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Furazolidone, gm. 2/	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Total, lbs.	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000

1/ Stabilized with butylated hydroxytoluene (hydrolyzed animal and vegetable fat).
2/ Supplied by premix containing a portion of the corn as a carrier.

CALCULATED ANALYSES

	Starting Rations											
	A-1	A-2	A-3	A-4	B-1	B-2	B-3	B-4	C-1	C-2	C-3	C-4
Productive Energy, Cal./lb.	986	982	993	993	1088	1089	1101	1101	1190	1195	1208	1208
Crude protein, %	23.16	23.03	23.60	23.60	25.60	25.60	26.10	26.10	28.19	28.13	28.60	28.63
C/P ratio	42.7	42.7	42	42	42.5	42.6	42.1	42.1	42.2	42.5	42.2	42.2
Crude fat, %	5.65	5.56	5.68	5.68	13.2	13.1	12.9	12.9	20.91	20.6	20.0	20.0
Crude fiber, %	2.50	2.53	2.49	2.49	2.16	2.18	2.31	2.31	2.42	2.43	2.13	2.13
Calcium, %	1.14	1.16	1.16	1.16	1.23	1.23	1.23	1.23	1.32	1.31	1.31	1.31
Phosphorus, total, %	.702	.709	.681	.681	.74	.74	.72	.72	.78	.78	.77	.77
available, %	.16	.17	.16	.16	.50	.50	.50	.50	.54	.54	.54	.54
Riboflavin, mg./lb.	2.89	2.77	2.71	2.71	2.9	2.9	2.8	2.8	3.1	3.0	2.9	2.9
Niacin, mg./lb.	28.2	28.5	28.0	28.0	28.3	28.3	28.0	28.0	28.5	28.2	27.9	27.9
Pantothenic acid, mg./lb.	8.2	8.1	8.3	8.3	8.3	8.2	8.1	8.1	8.4	8.3	8.2	8.2
Choline, mg./lb.	709	704	722	722	868	868	877	877	1028	1033	1033	1033
Arginine, %	1.272	1.24	1.32	1.32	1.41	1.40	1.51	1.51	1.56	1.55	1.70	1.70
Methionine, %	.496	.498	.497	.522	.538	.539	.568	.568	.58	.56	.58	.58
Cystine, %	.349	.340	.405	.405	.370	.366	.368	.368	.40	.40	.48	.48
Methionine & cystine, %	.845	.838	.902	.927	.908	.905	.936	.936	.98	1.00	1.06	1.06
Lysine, %	1.12	1.09	1.05	1.05	1.26	1.24	1.18	1.18	1.44	1.39	1.31	1.31
Tryptophane, %	.225	.223	.217	.217	.25	.25	.24	.24	.28	.27	.26	.26
Vitamin A, I.U./lb.	3987	3882	3900	3900	4493	4441	4450	4450	5000	5000	5000	5000
Vitamin D_3, I. C. U./lb.	400	400	400	400	400	400	400	400	400	400	400	400
Vitamin B_{12} (added), mcg./lb.	4	4	4	4	4	4	4	4	4	4	4	4
Glycine, %	1.087	1.067	1.204	1.204	1.250	1.180	1.100	1.100	1.110	1.700	1.590	1.590

News from LaCrosse Milling Company . . .

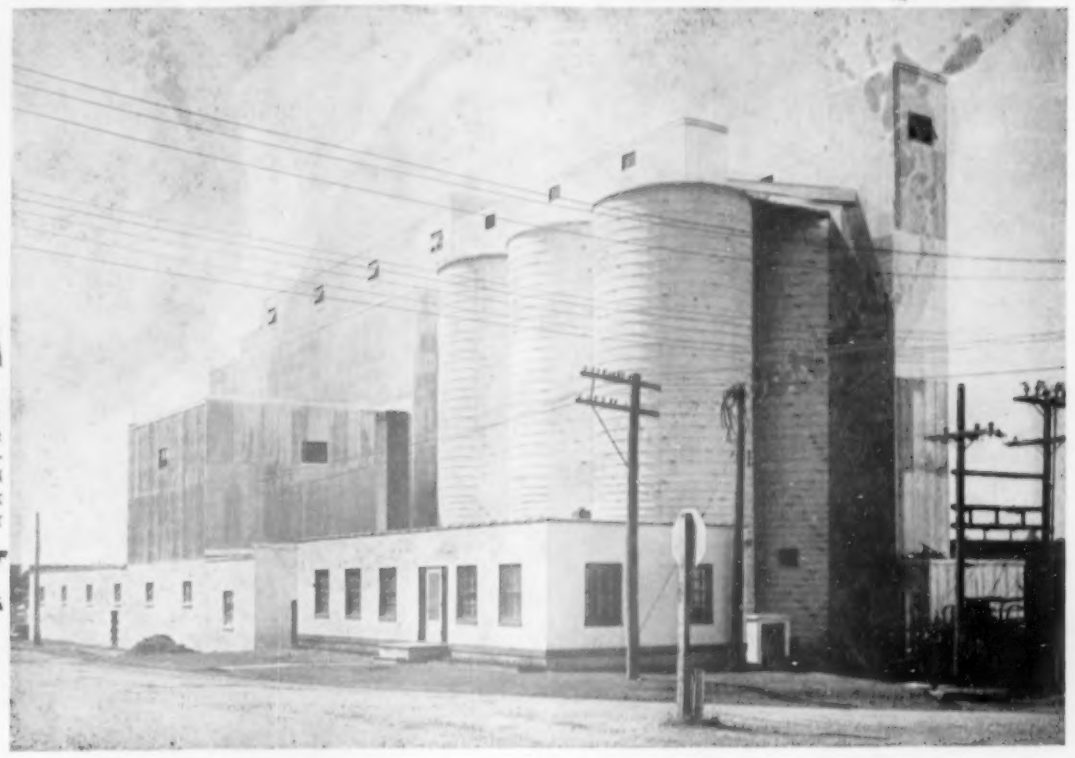
WE'RE READY TO ROLL!

There's been plenty of action here since the story below appeared in the Nov. 24, 1956, issue of Feedstuffs:

Wisconsin Feed Plant Destroyed by Fire

COCHRANE, WIS.—The LaCrosse Milling Co., Cochrane, Wis., was destroyed Nov. 19 by a fire which went out of control shortly after it began at about 3 a.m. The cause of the fire is not known.

Jay Martin, owner and general manager of the company, said the loss totals about $400,000. The entire plant, including most of its feed processing equipment and about 100,00(bu. of barley and oats were destroyec ttle manufactured feed was in th



. . . we set to work on a complete rebuilding and modernizing program — and we now invite you to . . .

LET US TAKE CARE OF YOUR FEED GRINDING NEEDS IN THIS ALL-NEW PLANT

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Thank you . . .

to our many friends and customers who have expressed concern and interest during our reconstruction program and to the manufacturers who helped us keep our customers supplied—our sincere thanks.

JAY MARTIN, Gen. Mgr. **HERB KELM, Sales Mgr.**

Since our plant was completely destroyed by fire some seven months ago, we've been busy planning and rebuilding with one major goal in mind—to serve you even better!

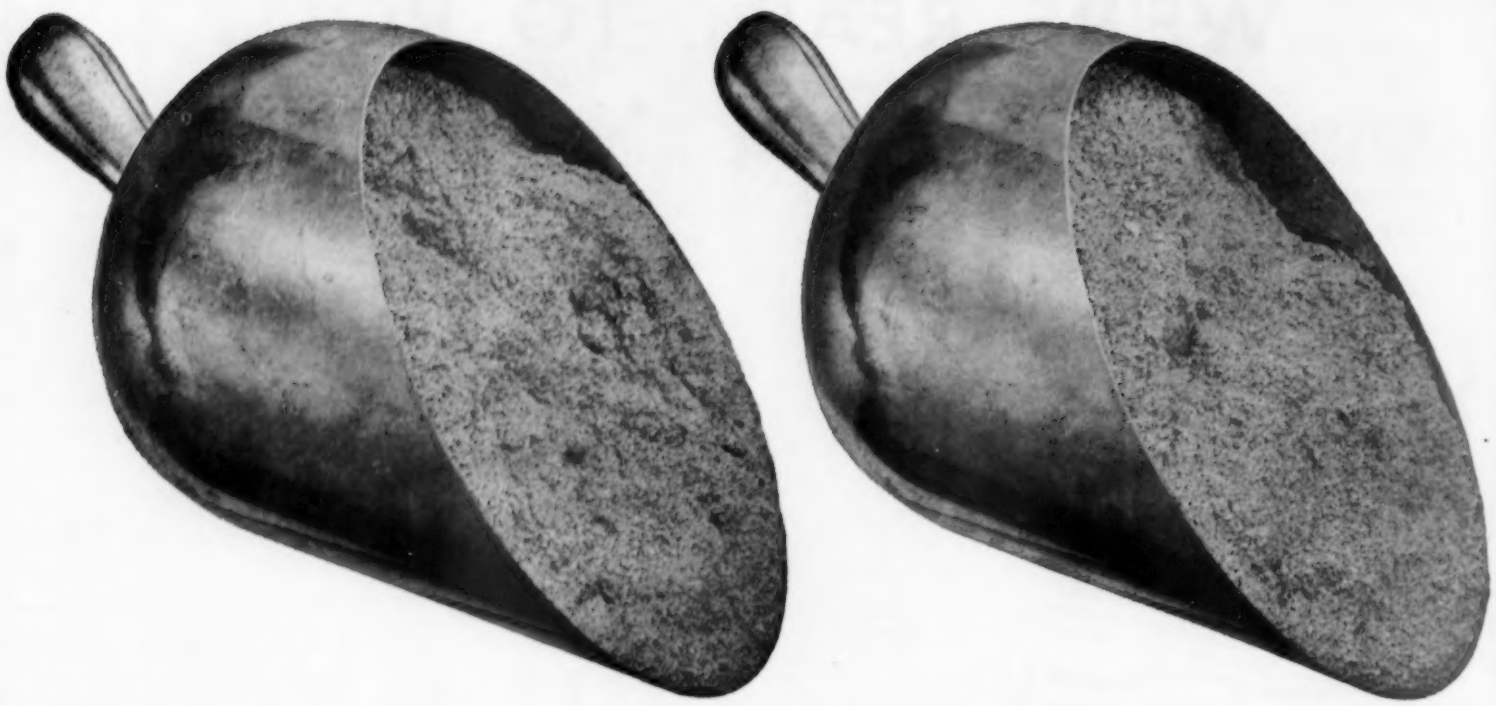
Now, we're set to roll with a plant that is brand new from the ground up . . . including the very latest in modern and efficient grinding equipment.

You who have been our customers through the years know our creed: For top quality grinding you must have the right plant; the right machinery and the right know-how. Throughout our rebuilding program these factors have been foremost in our minds.

So now we're looking forward to serving you again soon—and even better than in the past.

LA CROSSE milling co.

COCHRANE, WISCONSIN PHONE 88 TWX 8450 INCORPORATED



You can't tell the difference in antibiotics here

BUT YOU CAN TELL THE

you save $3 to $6 per ton

The high-level feed in one scoop contains Baciferm, the other a competitive antibiotic. One bird got the Baciferm in its feed, the other the competitive antibiotic. But you can't tell the difference! *Both gave the same good results.* Which then, is the "best" antibiotic for high-level feeds. Broad spectrum versus narrow spectrum – which is best?

Selective Activity — the key to effectiveness! Chase down the catchword "spectrum" and you'll find it has no meaning in high-level feeding. The chief concern in formulating a high-level feed is to make a product that fights secondary invaders, reduces mortality and speeds up recovery. No antibiotic can hit all bacteria nor needs to. The criterion should be an antibiotic's ability to concentrate on the dangerous bacteria without harming the beneficial ones. That's selective activity – key to *practical* effectiveness.

The beauty of Baciferm is its selective action – its special ability to aim its fire power on the dangerous bacteria while at the same time leaving untouched and productive the beneficial "bugs" that produce valuable vitamins and other unidentified growth factors.

Bacitracin patrols the full length of the intestinal tract! Baciferm, containing the selective antibiotic *bacitracin*, goes to work *in* the intestinal tract, safeguards its entire length, where it does its highly selective and effective job. This important advantage of Baciferm means no upset of the normal balance of bacteria in the intestinal tract. Tetracycline antibiotics, in the process of controlling the dangerous bacteria, also destroy the many favorable bacteria, thus clearing the way for yeasts and molds to multiply greatly and achieve a dangerous domination of the area.

The choice of antibiotic in high-level feeding must be made on the basis of the job to be done, and secondarily, on the cost to you. Gram for gram, bacitracin provides the same benefits the tetracyclines do, without the drawback of creating the dangerous imbalance of microorganisms in the intestinal tract. And, Baciferm saves you money at the same time.

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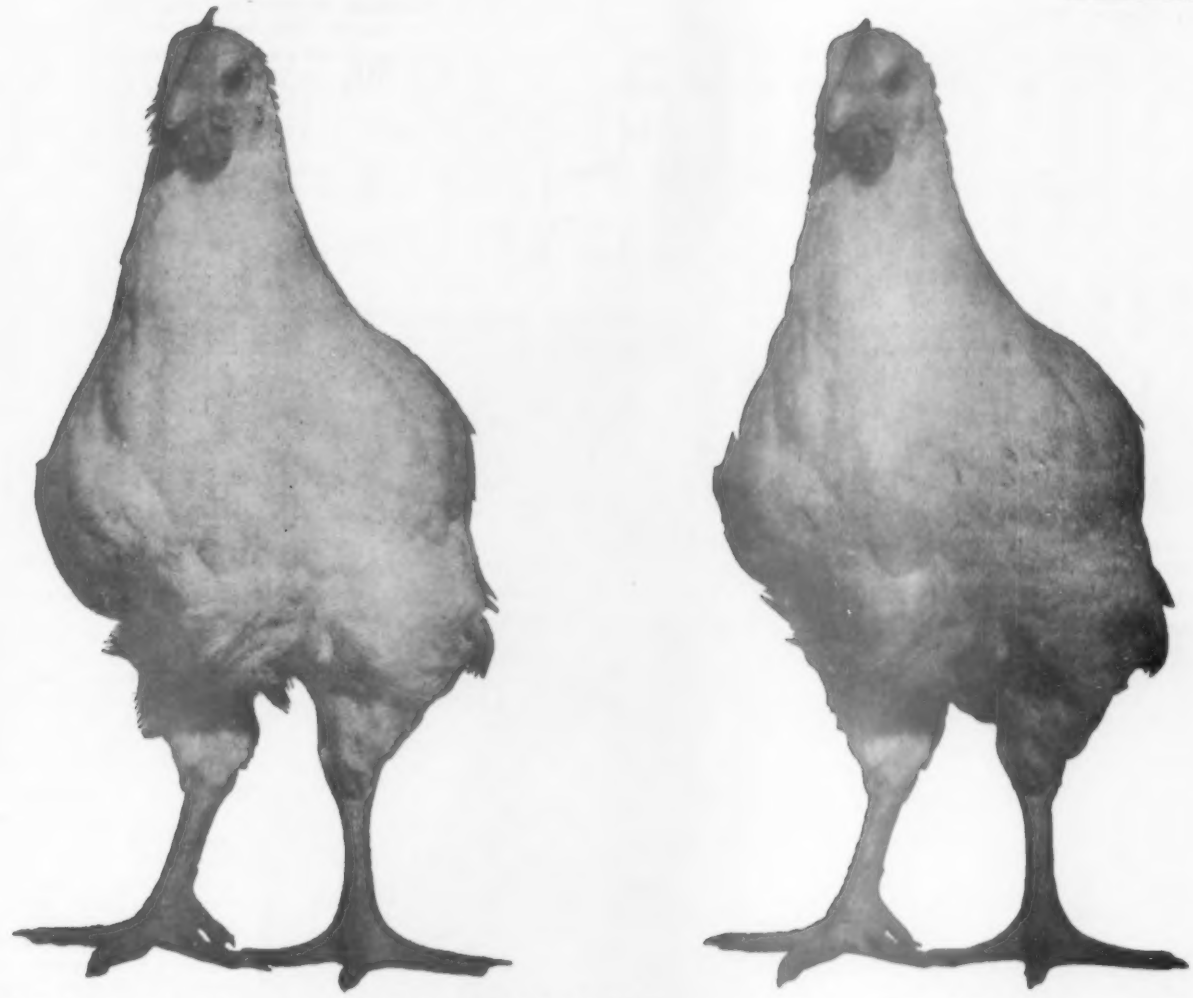

You can't tell the difference in antibiotics here

DIFFERENCE IN DOLLARS!

of feed with BACIFERM®

Baciferm evidence keeps piling up! An isolated test here and there doesn't mean a thing. Or, putting it another way, one test could prove anything. On the other hand, the evidence keeps piling up – test after test in state after state . . . college work . . . field trials . . . farm reports – that gram for gram, Baciferm saves you money while it equals the effectiveness in high-level feeding of any other antibiotic now known to science.

Keep your eye on your profits! With a sharp eye on profits, look at this arithmetic. Bacitracin costs $3 to $6 per ton *less* than the tetracyclines, an average saving of $4.50 per ton. If you produce 100 tons of high-level feed a month, this saving totals $450.00 per month. And that's $5,400 per year – saved with Baciferm!

Baciferm = bonus value, too! Baciferm is a *natural* fermentation product that contains a significant bonus value of B-vitamins, high protein, vitamin K and unidentified growth factors.

Nothing is better than Baciferm in your high-level feeds for fighting secondary bacterial invaders, for reducing mortality, for improving appetite, for speeding recovery, for stimulating growth. When you put Baciferm in feeds for broilers, layers, turkeys and swine, you're putting proved performance in the hands of your customers—and you're putting money in the bank.

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Table B. Composition of Finishing Rations (Broiler Trial #19)
Completed June 21, 1957, Md. Agr. Expt. Sta., Salisbury, Maryland

Ingredients	2% Fat Series 1A-F	2A-F	2B-F	2C-F	10% Fat Series 1B-F	2B-F	3B-F	4B-F	18% Fat Series 1C-F	2C-F	3C-F	4C-F
	Pounds per mix											
Ground yellow corn	1667.3	1661.3	1671.0	1671.5	1482.5	1391.75	1167.9	1411.5	1097.1	1172.2	1169.8	1151.5
Stabilized fat 1/	40	40	40	40	200	200	200	200	360	360	360	360
Meat and bone scrap, 50% prot.	-	75	75	75	-	100	100	100	-	125	125	125
Poultry by-products meal	150	75	75	75	175	75	75	75	200	75	75	75
Hydrolyzed poultry feathers	-	-	50	50	-	-	62.5	62.5	-	-	75	75
Soybean meal, 50% protein	415	435	375	375	510	522.5	440	440	605	610	505	505
Corn gluten meal	100	100	100	100	137.5	137.5	137.5	137.5	175	175	175	175
Dehy. alfalfa meal, 20% prot. (100,000 U A/lb.)	25	25	25	25	12.5	12.5	12.5	12.5	40	40	40	40
Dried corn distillers' sol.	40	40	40	40	88	65	65	65	50	50	50	50
Limestone	25	20	20	20	88	15.5	15.5	15.5	25	11	11	11
Di-calcium phosphate	25	25	25	25	27.5	13.5	14	14	30	12	13	13
Salt, iodized	7.5	7.5	7.5	7.5	8	8	8	8	8.5	8.5	8.5	8.5
Trace mineral mix (Delamix)	2	2	2	2	2	2	2	2	2	2	2	2
Choline chloride, 25% mix	1	2	3	3	3	4.5	5.5	5.5	5	7	8	8
Methionine hydroxy analogue, Ca salt	1.2	1.2	1.5	-	1.3	1.25	1.6	-	1.4	1.3	1.7	-
Choline chloride, 100% 2/	.25	.25	.25	.25	.25	.25	.25	.25	.25	.25	.25	.25
Butylated hydroxytoluene 2/	.25	.25	.25	.25	.25	.25	.25	.25	.25	.25	.25	.25
Arsanilic acid, 100% 2/	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2
Nicarbazin, 100% 2/	.25	.25	.25	.25	.25	.25	.25	.25	.25	.25	.25	.25
	Amount per mix											
Riboflavin, gm. 2/	3	3	3	3	3	3	3	3	3	3	3	3
Ca pantothenate, gm. 2/	10	10	10	10	10	10	10	10	10	10	10	10
Niacin, gm. 2/	30	30	30	30	30	30	30	30	30	30	30	30
Vitamin A, million IU 2/	3	3	3	3	3	3	3	3	3	3	3	3
Vitamin D_3, million IU 2/	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8
Vitamin B_{12}, mg. 2/	8	8	8	8	8	8	8	8	8	8	8	8
Menadione sodium bisulfite, gm.2/	1	1	1	1	1	1	1	1	1	1	1	1
Vitamin E acetate, IU 2/	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
Zn bacitracin, gm. 2/	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Furazolidone, gm. 2/	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Total, lbs.	2500	2500	2500	2500	2550	2550	2550	2550	2600	2600	2600	2600

1/ Stabilized with butylated hydroxytoluene (hydrolyzed animal and vegetable fat).
2/ Supplied by premix containing a portion of the corn as a carrier.

containing hydrolyzed feather meal did not require the addition of DL-methionine. This part of the experimental plan represents a repetition of these treatments studied in trial S-18.

SUMMARY OF RESULTS (TRIAL S-19)
June 21, 1957, Salisbury, Md.

Average 8-week weights, lb. (both sexes)

Ration Series	(A) 2% Fat (P)	(B) 10% Fat (M)	(C) 18% Fat (M)	(D) 2% vs. 18% Fat†	Average
1. (Poultry by-products meal)	2.78	2.78	2.74	2.77	2.77
2. (As 1 plus meat scrap)	2.73	2.80	2.74	2.78	2.77
3. (As 2 plus 1 plus hyd. feathers)	2.77	2.78	2.71	2.72	2.74
4. (As 3-MHA)	2.86	2.74	2.73	2.80	2.78
Average	2.78	2.78	2.74	2.77	

Average Feed Conversions (feed/lb. wt.)

	(A)	(B)	(C)	(D)	Average
1. (Poultry by-products meal)	2.14	2.01	1.90	1.97	2.01
2. (As 1 plus meat scrap)	2.22	2.03	1.91	1.99	2.04
3. (As 2 plus 1 plus hyd. feathers)	2.17	2.00	1.87	2.08	2.03
4. (As 3-MHA)	2.18	2.01	1.86	2.05	2.02
Average	2.18	2.01	1.89	2.02	

Average Feed Cost/lb. Broiler

	(A)	(B)	(C)	(D)	Average
1. (Poultry by-products meal)	9.54	9.21	8.95	8.95	9.16
2. (As 1 plus meat scrap)	9.92	9.23	8.84	8.97	9.24
3. (As 2 plus 1 plus hyd. feathers)	9.80	9.29	8.92	9.55	9.39
4. (As 3-MHA)	9.47	8.97	8.52	9.08	9.01
Average	9.68	9.18	8.81	9.14	

Feather Score, %

	(A)	(B)	(C)	(D)	Average
1. (Poultry by-products meal)	73.5	75.8	69.0	75.3	73.4
2. (As 1 plus meat scrap)	72.0	75.8	76.0	78.5	75.6
3. (As 2 plus 1 plus hyd. feathers)	73.8	80.3	74.0	74.5	75.6
4. (As 3-MHA)	78.3	80.2	79.3	78.0	78.9
Average	74.4	78.0	74.6	76.6	

† Available free choice.
400 Vantress White crossbred broiler chicks used per pen (equal numbers of males and females).

At the end of the trial, the feathering condition was scored by four individuals independently and the scores have been averaged and tabulated. These scores are expressed on a percentage basis with perfect feathering representing 100.

Results

From the results shown in the accompanying table, it will be noted that there was no apparent difference in the average weight of the broilers at eight weeks due to any of the experimental variables. It should be remembered that the 18% added fat series contained approximately 15% added fat in the finisher ration since it was prepared by diluting the starting ration with corn. Similarly, the starter series containing 10% added fat received only approximately 8% added fat in the finisher feed. The feed conversions were improved as one would expect when the fat level was increased. There was little or no effect seen as a result of changing either the source of animal protein or the addition of the methionine hydroxy analogue. The broilers which received the starting ration containing 10% added fat and the finisher ration containing 8% added fat consumed only 2.01 lb. of feed per pound weight on the average as compared with 2.18 for the broilers fed the ration containing 2% added fat. The average feed conversion for the

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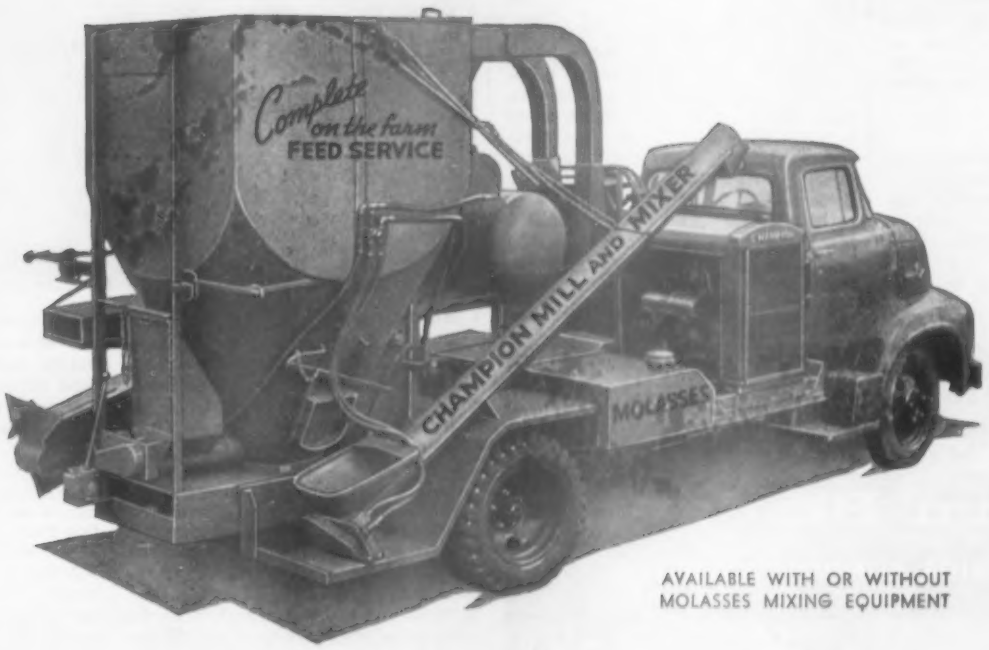

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broilers fed the high fat rations was only 1.89. There were no apparent adverse effects from the higher levels of fat on feather condition as indicated by the feather scores shown in the table.

The average feather scores as shown in the table also indicate that the use of high levels of fat has no adverse effect on feathering condition. Actually, there was no difference between the feather scores of the broilers fed the pelleted feed and those fed the mash containing 18% fat. Broilers fed the mash with 10% added fat had a slightly higher feather score. Also, the addition or the removal of the methionine hydroxy analogue had no adverse effect on feathering condition.

Feed Costs

Feed costs were calculated using the bulk prices for various ingredients as quoted by a particular mill in Delmarva. To these ingredient costs, $2 per ton was added for pelleting where the feed was pelleted, and a constant $16 mark-up was also included. The average feed costs per pound of broiler as shown in the table were obtained on this basis. It can readily be seen that rations containing the higher level of fat produced broilers with the least feed cost per pound. Feed costs for the broilers in the high fat series averaged 8.8¢ lb. with one group averaging only 8.52¢ per pound, compared with an average of 9.68¢ per pound for the broilers fed the pelleted feeds containing 2% added fat in the starter and 1.6% added fat in the finisher. When 10% fat mashes were used, the average feed cost was 9.18¢ per pound of broiler.

For the broilers which had free access to both the low fat pelleted feed and the high fat mash, it is interesting that during the starting period the selection was inconsistent between pens with an average preference favoring the pelleted low fat feeds. During the starting period, these four pens having free access to both feeds consumed 55% of the 2% fat pelleted feeds and 45% of the 18% added fat mash ration. On a nutrient basis, the consumption of high fat mash and low fat pelleted feeds would be almost the same during the starting period. However, during the finisher period, there was a marked preference for the low fat pelleted rations, with 64.5% of the feed intake between the sixth and eighth weeks being in pelleted form and only 35.5% being in the form of a high fat mash. The average percent of total fat consumed during the starting period on this basis was 12.3%, compared with 9.3% during the finishing period. Whether or not the occurrence of unusually hot weather during the last two-week period influenced the preference for pellets is not known. It

(Continued on page 88)

LOOKING AT SAMPLES—A record-setting broiler field trial was recently completed at the University of Maryland broiler research farm at Salisbury, Md. A field day was held following the trial for broiler growers, feed men and others interested in broiler production and rations. In this picture, left to right, William Handcock, Fox Co.; Stokes Homan, Caper Acres mill and broiler farms, and William C. Sloan, American Cyanamid Co., look at some cooked samples of the broilers.

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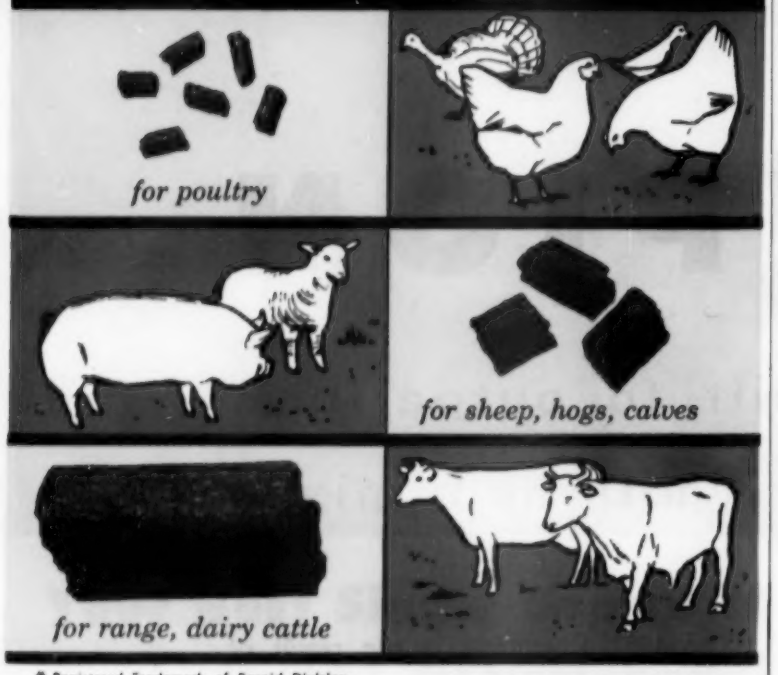

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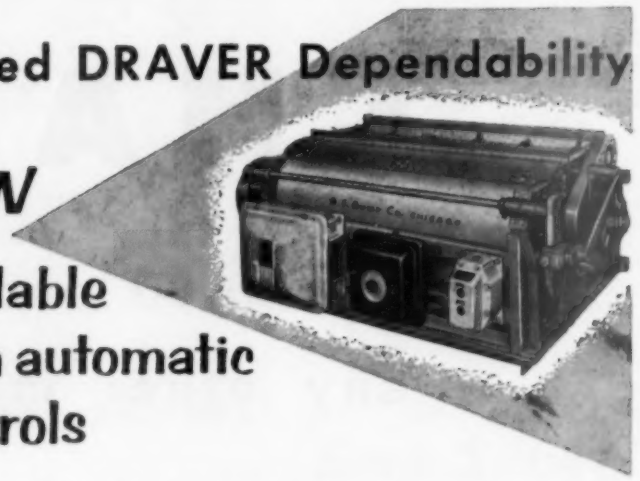

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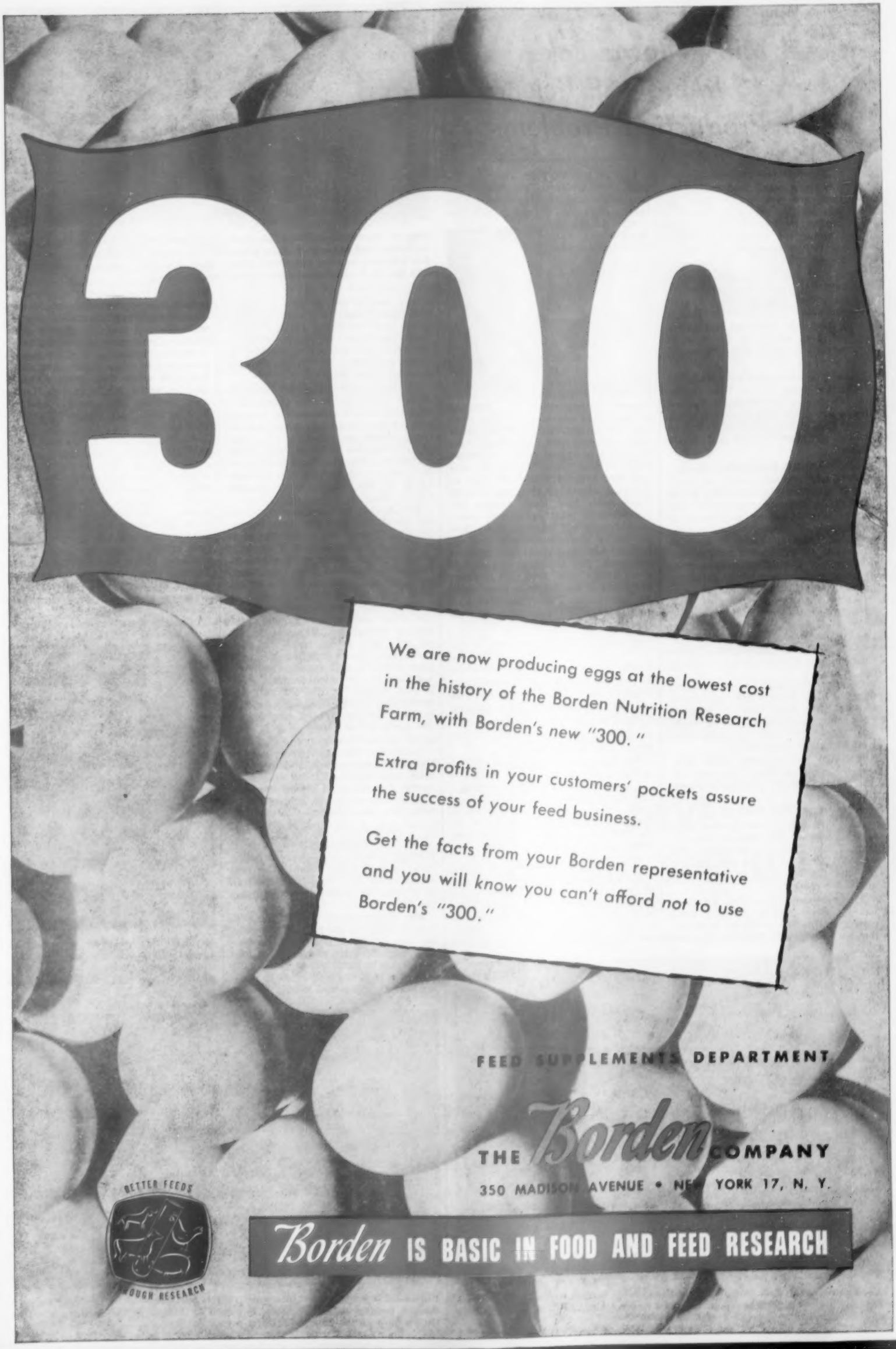
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Reducing Plant Costs

Feed Mill in Iowa Takes Steps to Improve Efficiency, Meet Production Problems

By ROGER BERGLUND
Feedstuffs Editorial Staff

If you are a retail feed mill operator, you are well aware that, to maintain or improve your business and profits in today's competitive feed game, it's necessary to hold down or reduce labor and other costs per unit of feed.

Also, with agriculture and farmers' demands for products and services changing, it may be necessary to provide some new and better services.

But, you ask, how can mill costs be held down or cut in the face of demands for more different feeds, more services, etc.?

Sure, you know that you probably should be doing better here, using less labor there, or turning out more and better feeds with the same work force. You can see that right off in looking at your volume and profit picture.

Analyze Operations

Obviously enough, much of your cost is involved in labor. But, when you get right down to cases, it's not always easy to reduce labor costs, or other costs. To get going on a program of reducing costs, it may be necessary to get down to specifics and analyze the different operations in your mill — receiving, grinding, mixing, pelleting, handling, etc. And to know where you're going or what to aim for, you probably will need some guideposts along the way. When you do get going, you may find that some little things add up to significant savings through better efficiency.

Of course, in many cases, you can figure that there's nothing wrong that a little more volume wouldn't cure. That is, you could use the same work force and still turn out more feed and boost your profits.

However, chances are that there are some places where you can reduce costs and still produce a bigger tonnage.

Iowa Mill Does It

A case in point is the Kerber Milling Co., a retail feed mill at Emmetsburg, Iowa. This is a successful 36-year-old firm; yet it has been looking for and finding ways to hold down or reduce costs.

The company, headed by Fred Kerber, does custom grinding and mixing and makes a line of feeds under its own brand—Kerber Hy-Test Feeds. Its trade area is roughly within a 40-mile radius of Emmetsburg. Most of its products are swine and beef cattle feeds, plus some poultry feeds. The firm also does some custom manufacturing for one of the larger feed companies.

EDITOR'S NOTE: This is the first of a series of articles telling just how a number of feed mills have taken steps to reduce production costs. At the last Midwest Feed Production School, man-hour standards for various operations of plants of different sizes were made available to the feed industry for the first time. A good many mills, a survey shows, have used these in-plant cost standards directly or indirectly in improving the efficiency of their mill operations. These articles will explain some of the problems mill operators have faced, how they have compared their operations with "model" mill standards, and how they have improved efficiency in different phases of their operations. Some mills have made certain adjustments in their operations, some have determined ways to make better use of manpower, some have installed new equipment to improve efficiency. The accompanying article deals with a retail feed mill in Iowa and steps it has taken to meet various problems. Future articles will deal with other plants of various types and sizes.

Roger Berglund

The fact that this firm is interested in improving its feed plant efficiency and reducing costs is reflected in the fact that two men from the organization have attended the Midwest Feed Production School, sponsored by the Midwest Feed Manufacturers Assn., in Kansas City.

Cost Standards

Earl Stelpflug, manager, has been at the school, and Phil Kerber, the production manager and son of owner Fred Kerber, was at the last school in 1956. One of the things, with which Mr. Kerber came back from the school was a set of in-plant cost standards. Based on a study of many mills and assuming certain conditions, man-hour standards were set up for the various operations in plants producing 30, 100 and 200 tons per eight-hour day.

(A book containing the complete report on the plant cost standards—enabling a mill operator to analyze and compare his costs with those of other plants—is available at a price of $15 from the Midwest Feed Manufacturers Assn. For further information, the association may be contacted at 20 W. 9th St. Bldg., Kansas City 5, Mo.)

The Kerber mill, being a small retail plant, took the standards for the "model" 30-ton mill as somewhat of a guide in its operations. These cost study results, along with other information acquired from the many speakers and students at the school, have been put to work.

The old Kerber mill building houses the office and custom grinding and mixing operations. Adjacent to the old mill is a newer plant, built six years ago, where branded feeds are manufactured and stored. Grain going into the branded formula feeds is still ground in the old mill and hauled over to the newer plant. Thus, as Phil Kerber pointed out, one of the needs in the newer plant is more grain storage and grinding facilities.

Generally, one man takes care of the custom operations, and there are three men who handle all operations in the formula feed plant. They are putting out a larger tonnage than four men once handled.

Compared with Standard

Covering everything from receiving through loading out (and including labor and foreman time), the cost standard for the "model" 30-ton mill is a total of around 1.8 man-hours per ton of feed.

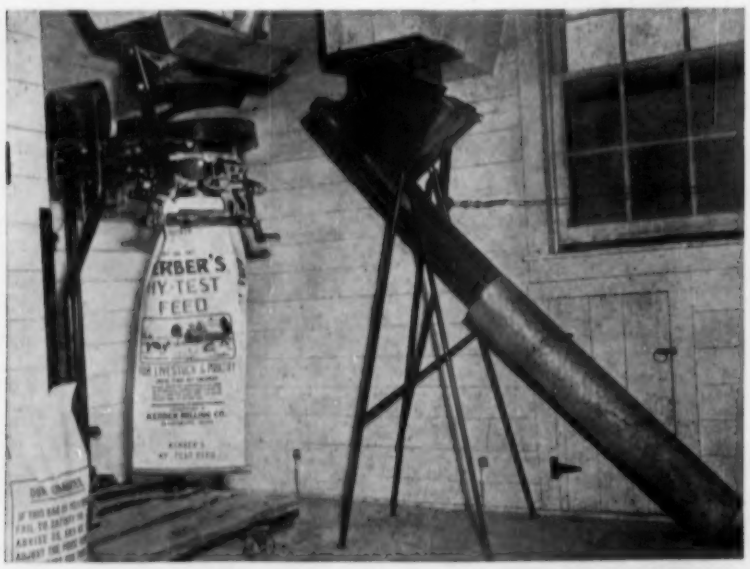
Mr. Kerber notes that in his mill, it is difficult to pin-point labor costs for the different phases of production because men are shifting jobs from time to time, but some figuring indicates that the mill often is making and handling feed with about 1.6 man-hours per ton. This would vary somewhat, depending on volume and other factors and, it appears, could be less. One reason for the difference from the standard is that for the 30-ton "model," it's assumed that all ingredients other than grain are handled in sacks, while in the Kerber mill soybean and linseed meal, as well as grain, are received and handled in bulk.

A principal result of the cost study, said Mr. Kerber, has been a greater awareness of man-hour costs and seeking of ways to reduce unit costs and make more feed with the same number of men. Not all improvements at the Kerber mill have been made just since the last production school, but previous improvements plus other changes made partly on the basis of the cost study and other things learned at the school have improved efficiency.

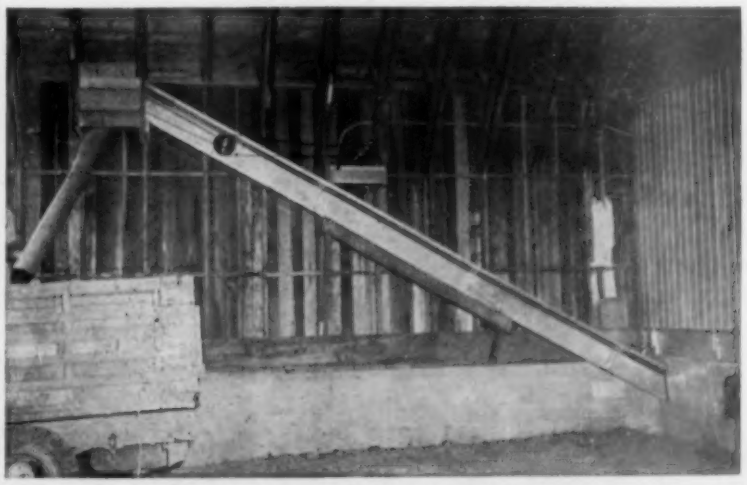
One example of improvement is found in the handling of ground grain in the older custom mill. Formerly,

Here is the Kerber Milling Co. plant at Emmetsburg, Iowa. On the right are the office and older mill, used primarily for custom grinding and mixing. On the left may be seen the newer plant, where branded feeds are manufactured, and the feed warehouse with covered loading dock.

Here is the "weigh-buggy" used at the Kerber mill in weighing and handling ground grain. It was built by putting a box and casters on an old scale.



Feed going out in bulk is drawn from the same bins from which feed is sacked. As shown here, a portable spout is placed under a bin, and then the feed drops into a weigh-buggy on the first floor.



Bulk feed is being loaded into a delivery truck. The feed, after being dumped from a weigh-buggy into a pit, is raised by means of the inclined elevator shown here at the covered loading area.

Lloyd Larson (left), executive vice president of the Midwest Feed Manufacturers Assn., presents a "certificate of achievement" to Phil Kerber while on a visit to the Kerber mill to see how the firm had used the Midwest's in-plant cost standards to improve plant efficiency. Mr. Kerber, who attended the last Feed Production School, received the certificate for filling out a questionnaire which showed, among other things, how results of the cost study had been applied.

the Kerbers were putting ground grain into sacks and handling it that way—the sacks were used in order to weigh the grain for mixing. This problem was solved with an expenditure of $40, Mr. Kerber points out. They had an old scale which was not being used. Casters were put on it so that it could be rolled, and a box was built which has a sloping bottom and a gate from which grain discharges. This "weigh-buggy" holds 500 lb. of grain. Now, grain after being dumped from trucks with a truck hoist and elevated into bins is ground and then run into the "weigh-buggy" and weighed out for mixing. Ground grain for formula feeds goes into a pit and is elevated into a truck for hauling to the other plant.

Mr. Kerber figures that this one improvement has meant a saving of around 2 man-hours per day, or the equivalent of one fourth of a man.

Bulk Feed

Meanwhile, he says, the biggest recent mill problem has come with increasing bulk feed. The firm started offering feed in bulk around the first of May and about half of a tonnage increase of 20-25% over a year ago is attributed to the new bulk operation. The cost study and other production school information provided some ideas on bulk handling.

When the newer mill was built, little feed moved out in bulk and later a warehouse was built where it had been planned that bulk finished feed would be handled. Certain arrangements had to be made recently to handle bulk, and here, at present, is how bulk is handled:

Four bins can be used for feed going out in bulk. These are the same bins from which feed is drawn for sacking on the second floor. A portable spout is put under a bin, and the feed is directed down to a 1,000-lb. weigh-buggy (also used for ingredients in mixing) on the first floor. This is moved to a pit at the covered loading dock on the warehouse, and then the feed is raised from the dump sink into trucks by means of an inclined farm-type grain elevator. Feed hauled out in a bulk truck is unloaded by means of an auger.

Now, Mr. Kerber is planning to install 15 bulk bins next year. These, he plans, will be wood bins, 4 ft. square, with hopper bottoms. The feed will be run into the weigh-buggy and handled as at present.

The use of complete livestock feeds, in bulk form, is increasing, Mr. Kerber says. For example, complete cattle feeds, including both concentrate and roughage (corn cobs) are now being made and hauled directly to feeders in a large cattle feedlot, eliminating all feed handling on the farm.

Other Improvements

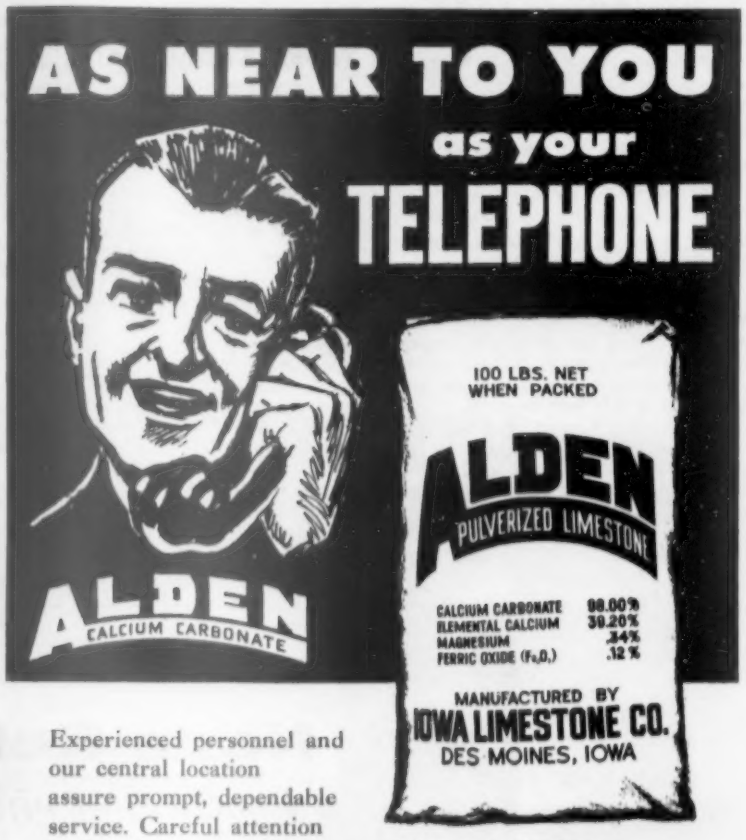
Another principal improvement at the Kerber mill has been in maintenance. Maintenance costs last year were cut $3,000 from the previous year. A definite program of preventive maintenance, including scheduled lubrication, has been set up, with the mill superintendent responsible. Previously, there was no real schedule. For one thing, says Mr. Kerber, it is expected that pellet mill troubles will be prevented or reduced. The program also includes scheduled inspection of buildings and building maintenance and repairs. For example, roofs are treated every two years to prevent leaking.

Other improvements or planned improvements include these things in other phases of mill operation:

Some rearranging has been done

1957 PRODUCTION SCHOOL

As shown in the 1956 plant cost study, warehousing requires more man-hours than any other operation in a feed mill. Presentation of the results of a new study of warehousing will be a principal feature of the 1957 Midwest Feed Production School, to be held Nov. 20-22 at the Kansas City Auditorium. The program will include actual demonstrations of feed handling equipment and operations.



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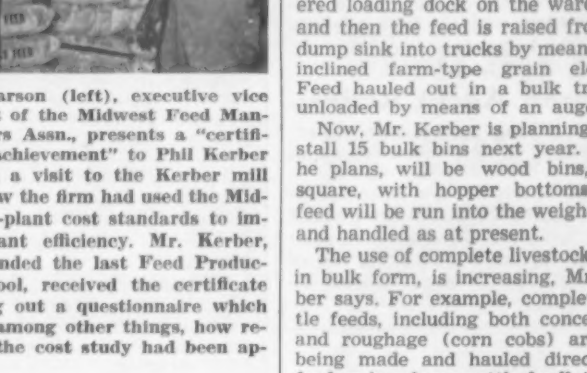

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in the 36-by-120 ft. sacked feed warehouse to facilitate moving materials.

Efforts are being made to improve and simplify packaging, and Mr. Kerber has actually been out timing packing and other operations.

The pelleting and crumblizing system was designed to make best use of gravity flow. Fats are not yet being added to feeds, but Mr. Kerber is now aware of problems in connection with fats in pelleted feeds.

Some changes have been attempted in connection with ingredient receiving, but so far no recent change has been finally made. At present an auger is used in moving trucked-in bulk ingredients into the mill.

Not directly related to the subject of improving mill efficiency but of interest is another point in the Kerber operation. As of April 1, the firm offered a cash discount of $4 per ton. Accounts receivable have been reduced 30%, while at the same time tonnage has increased.

Renderers Promote Japan Tallow Sales

WASHINGTON — The National Renderers Assn. has signed a market development project with the U.S. Department of Agriculture for promotion of tallow sales in Japan.

Richard B. Mortimer, Peterson Manufacturing Co., Los Angeles, president of the NRA, signed for the association, and Gordon O. Fraser, assistant administrator of the Foreign Agricultural Service, signed for the USDA.

The signing came June 28 after a two-day meeting on cooperative market development programs. The main part of the new program will be an advertising venture to promote soap made from tallow in Japan. Newspaper, television and radio promotion will be used, but no brand names will be advertised.

Mr. Mortimer will go to Japan in the fall, tentatively in October, to set up the program for one year. If it is successful, it could be extended, the NRA reported. Under the project, Japanese industrial leaders are also to come to the U.S. to see how tallow is produced and handled, to visit laboratories and to study the U.S. tallow market.

Total value of the project is $150,000. The Foreign Agricultural Service is making available $125,000 in foreign currencies in Japan. Two Japanese associations, the Japan Oil & Fat Processing Industry Assn. and the Japan Oil & Fat Importers & Exporters Assn., with the NRA, are supplying the balance.

Veteran Agent Retires

McRAE, GA.—L. R. Lanier, veteran Georgia county extension agent, is retiring after 35 years' service.

W. A. Sutton, Georgia extension director, in announcing the retirement of the Southeast district agent, said: "Georgia agriculture is losing one of its all-time conscientious, capable individuals."

Toledo Port Authority Selects Location For Development

TOLEDO—The Toledo Port Authority has chosen the 65-acre Presque Isle site for priority attention in its development program.

Its choice followed the recommendation of New York engineering consultants that the Presque Isle site was the more desirable of the two sites upon which the authority has options.

The authority has authorized the engineers to proceed with physical surveys to determine the cost and scope of development of a general purpose marine terminal, including a grain terminal at Presque Isle.

Parsons, Brinkerhoff, Hall & MacDonald, in its preliminary site study, estimated it would cost $3.8 million to develop completely the Presque Isle site.

The land, now owned by the Chesapeake & Ohio Railway, lies on the east bank of the river about one mile from its mouth. It is downstream from all bridges. About half the land is now under shallow water.

The consultants said that dredging required to provide deep water at the harbor line there would produce material suitable for fill to bring the site to an elevation of 10 ft. above low water level.

They said the site could be developed to include a 3- to 5-million bushel grain elevator with lake and export vessel berths, and a general cargo terminal with three berths.

WORK PROGRESSES

UNIONVILLE, MO.—The work of putting in the foundation for the new grain elevator for the M.F.A. here is completed and construction is now under way on the building, elevator, warehouse and office, according to Elvin Staggs, local manager. It is expected that the plant will be ready for the general harvest.

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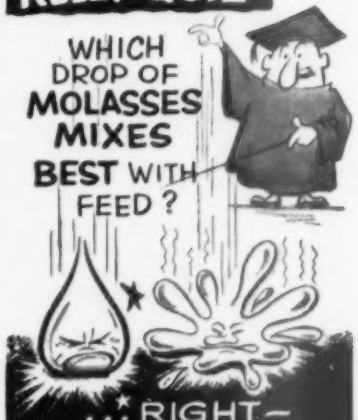

. . . RIGHT—
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KELLY DUPLEX
MOLASSES HEATER

Molasses of the proper consistency means thorough, even integration—a better sweet feed product—and bigger profits. And that's just what you get with a Kelly Duplex Molasses Heater. It lets you set and maintain any temperature from 150° to 190° F.

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Without obligation, send me complete information on the Kelly Duplex Molasses Heater.

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Ron Gerig Ray Ringger

Honeggers' Promotes Three to New Posts

FAIRBURY, ILL.—New positions have been announced for three employees of Honeggers' & Co. Ron Gerig and Ray Ringger have been appointed assistant district managers of the firm's LaSalle sales district. Clyde Koehl has been promoted to manager of the purchasing and traffic section of the company's Indianola, Iowa, plant.

The two LaSalle assistant managers will assist Ed. Ringger, district manager, in development of Honegger dealers and sales in the district.

Mr. Gerig has six years of retail feed sales and farm service work, including his most recent position at a Honegger Associated Feed Store in Wenona. He also farmed several years. Mr. Ringger has about four years of retail feed sales experience and farm service work and also has farmed. He formerly was employed in a Honegger Associated Feed Store in Gridley.

Mr. Koehl has worked in both the purchasing and traffic departments at Honeggers' since early 1954, in the Fairbury operation.

June Milk Production Up From Year Ago

WASHINGTON—Milk production on farms during June totaled 12,662 million pounds, the U.S. Department of Agriculture reports. This was the highest total for the month since 1945 and was 3% above the 1946-55 average. Output exceeded that of a year ago by 1%.

USDA said milk flow declined seasonally from May to June at a slightly faster rate than a year earlier and average. The faster decline this year reflects a downward seasonal trend in the rate per cow and a continuing decline in the number of milk cows.

For the first six months of 1957, a record total of 67.3 billion pounds of milk was produced, compared with the previous high of 66.8 billion pounds for the comparable period of 1956.

Milk production per cow in crop reporters' herds averaged 21.73 lb. on July 1, with output continuing at record levels for that date over much of the country.

Illinois Firm Supplying Unit Parts, Service

WASHINGTON, ILL.—The Cook Machinery Works here is now furnishing parts and service to Illinois users of the Jay Bee "All-in-One" Feedmaker, mobile feed processing plant manufactured by J. B. Sedberry, Inc., Franklin, Tenn.

It's DANNEN for SOYBEAN OIL MEAL and

- Cottonseed Meal
- Linseed Meal
- Bran and Shorts
- Tankage
- Meat Scraps
- Other Feed Ingredients
- Grain—oats, corn, wheat, rye, barley, soybeans

DANNEN

DANNEN MILLS, INC.

Grain and Jobbing Division

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Step up the "Conversion Factor"

OF YOUR BEEF AND DAIRY FEEDS with

RUFIS®

(RUMEN) (UNIVERSALLY ACCEPTED) (FEED) (INOCULENT) (SUPPLEMENT)

Patent No. 256083

NATURAL LIVE RUMEN BACTERIA CONCENTRATED

SAFE & EFFECTIVE

ALL RUFIS is Subjected to Rigid SAFETY TESTS . . . by one of the Countries Leading Laboratories!

. . . and STEP-UP SALES and PROFITS of your Cattle Feeds!

Dairy men want a feed that will give their herd more than mediocre results. RUFIS, nature's own mutual-aid program, added to your Formula Feeds will give them what they want . . . decreased milking slumps . . . extended production time . . . and with a butterfat gain up to 32%.

RUFIS is the NATURAL rumen bacteria from fast-gaining government inspected cattle stabilized in a scientifically balanced nutritive base. In recent tests a well-known midwestern feeder added RUFIS to the ration of his growing calves.

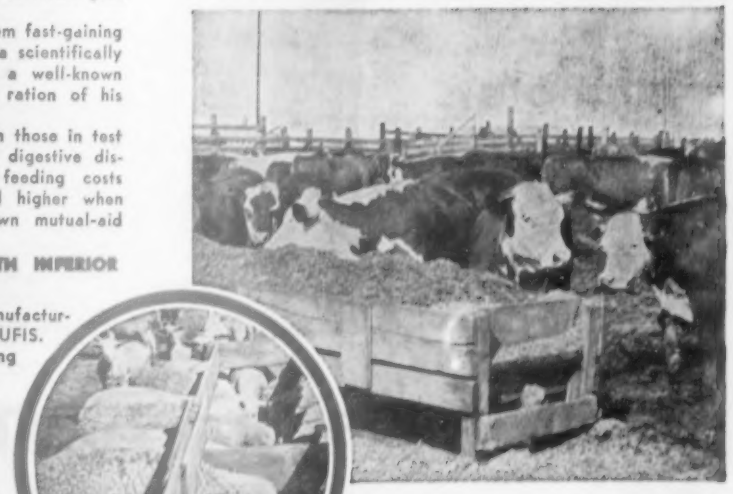
He reported gains up to 30% faster than those in test lot. Their hair became slick and glossy; digestive disturbances were practically eliminated; feeding costs were slashed almost 20%; they graded higher when marketed—PROOF—RUFIS is nature's own mutual-aid program for top results.

RUFIS IS NOT TO BE CONFUSED WITH INFERIOR ARTIFICIALLY CULTURED PRODUCTS.

RUFIS is the NEW patented process (manufacturing and feeding). There is only one RUFIS. It has been thoroughly tested by leading colleges and through its authorized distributor arrangement, tested in feed lots throughout the United States under all types of feeding conditions.

When RUFIS concentrate is used, actual field tests have shown greater feed utilization with corresponding weight gains . . . RUFIS can be fed with stilbestrol. Tests have shown a savings of 3 to 3½c per pound to cost of gain. It is easy to mix. Cost is low. PLAN NOW to add RUFIS to your FORMULA FEEDS. Step up the CONVERSION FACTOR! Give your customers the EXTRA FEEDING RESULTS that mean EXTRA TONNAGE for you.

Exclusive Distributor Franchises Available . . . Write TODAY for more facts and information.



When RUFIS is added to the ration of sheep and other ruminants results show increased assimilation in high roughage rations, better health, more rapid growth . . . and increased gain.

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The Effect of Integration On the Egg Industry

By Dr. C. K. Laurent

In the case of broilers, integration has been made to work successfully for a number of years, whereas integration in the egg industry is just drawing the attention of a large number of poultrymen. I will discuss the development of integration in the egg industry, where it has been successful and where it has not, something about the more prominent developments taking place, and finally try to analyze how far it might go.

There has been a great deal said and written about integration recently, but in talking with people in Georgia and other parts of the country I find there is a lot of misinformation as to what it actually is. Economists classify integration into two groups: vertical and horizontal. Vertical integration is the combining of a number of interrelated enterprises under one management. For example, one person might direct the activities of a supply-flock, hatchery, manufacture feed or operate a dealership, grow replacements, and either own and operate the laying houses or get eggs produced on a contract basis, pick up eggs, process, and market. An operation would be partially integrated if two or more of these phases were under one management. You recognize, of course, that most hatcheries would fall into this category inasmuch as they own or exercise considerable control over their supply flocks.

A horizontally integrated operation is one in which the same operation may be carried on in different localities. For example, Purina might have feed mills in Guelph, Quebec, Georgia, etc. The primary purpose of each operation is to mix feed.

Tried Before

In order to put integration in its proper perspective it is well to look back into history to see what can be learned. Integration in the egg industry is by no means new. It has been tried on many occasions and some of the attempts go back 40 years. One such operation in New Jersey had as its goal a million hens. One company would handle the whole affair from beginning to end. It did not succeed. Many years ago in California there was a scheme to sell shares of stock in a huge enterprise set up to produce eggs. A person could buy shares in the business and sit back and wait for the eggs to flow in. This project did not pan out. Not too long ago, a large feed company set up a very elaborate integration in the southern part of the U.S. Several hundred thousand layers were to be placed in the area when it was in full operation. The company that planned the project knew what they were doing and thought they knew how to make it work. However, after about three years the project was dropped. They ran into difficulty in getting eggs produced and in paying growers premium prices over a long period of time.

During this past year we have seen a number of integrated operations starting up in various sections of the U.S., the most celebrated one being the Kansas cage plan. This operation has been underway about a year, and it is too early to tell how it will work out. I will discuss this in more detail.

Advantages of Integrating

The principal advantages given for integration are: (1) Control of the product from chick to egg and on to the retail store, (2) uniform production practices, (3) lower feed and chick costs, (4) reduced marketing problems for eggs and hens, (5) superior management, and (6) less capital problems. I would like to discuss each of these factors.

Control of Product: By using a limited number of breeds, strains, or crosses, the eggs produced will tend to be more uniform with respect to size and quality. By using feed from

(Continued on page 52)

EDITOR'S NOTE: The past, present and future of integration in egg production and marketing are discussed in this article. Dr. C. K. Laurent, who has until recently been head of the poultry department at the University of Georgia, is a recognized authority on integration developments and is well known as a speaker and writer on the subject. In this article he analyzes the development of integration in eggs, outlines advantages and disadvantages, tells where it has been successful and where it has not, and makes some predictions of where it is likely to go. Integration has worked on a limited scale, but to date there are no successful large scale operations, he points out. However, he says, integration might be made to work in certain areas and under certain conditions. And, he adds, it is possible that plans which guarantee prices or returns in some way may yet revolutionize the egg business. This article is from a talk by Dr. Laurent at the Ontario Poultry Conference at Ontario Agricultural College, Guelph, Ont.

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Better Return on Tonnage

Health and fast rate of growth are outstanding characteristics of broiler crosses based on Nichols females. These factors have a direct influence on feed conversion and they often spell the difference between profit and loss in returns over feed cost.

In every broiler area, results in commercial operations are proving daily that the products of Nichols research and Nichols breeding program are your best assurance of getting the most from every ton of feed.

Chicks from Nichols females are available in every broiler area. Ask for them by name.

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The great farmer demand for the Radson Moisture Tester is now an established fact! Thousands of these accurate electronic instruments have been used with complete satisfaction by the nation's farmers to test the moisture content of their grain. Today, prove to yourself the profit-making features of the Radson Moisture Tester.

A Few Choice Dealerships Still Available

RADSON ENGINEERING CORP.

MACON, ILLINOIS

Will you please help us settle a question??

Our advertising department is divided into two camps and we are frankly at a loss to tell which side is right. The Art Director, a lad dedicated to the theory of Confucius, claims that "Art is all" and that "one picture is worth a thousand words." The Advertising Manager (not one to casually question the much quoted Confucius) agreed to try a few ads with much "see" and little "say." You probably have noticed these Ray Ewing ads in the trade papers the past few months... But now – the Copy Chief, with pen in hand and a bulging book of adjectives under his arm is challenging the artist. Armed with some choice quotes like "Remember the Alamo"... "Fourscore and seven years ago"... "Thou shalt love thy neighbor as thyself"... he scored pretty heavily in favor of the written word. Then sensing an advantage, he pressed further by chiding the A.D. with questions like, "Just how can you impress your audience with a picture which would show The Ray Ewing Company as the Pioneer in the concentrated dry vitamin premix field?... How are you going to picture the performance of Ray Ewing Antiox as the preferred BHT Preservative Product in the feed industry?... How are you going to sketch Ray Ewing Vitamin A's long lasting stability?... How will you picture peace-of-mind that Ray Ewing customers enjoy from the knowledge that only the finest, top-quality ingredients are ever used in their pre-mixes?

Well folks – that's our problem. About the only way we can settle these temperamental talents is to let the readers and viewers of this magazine decide. If your decision to inquire about, or order an advertised Ray Ewing Product is most influenced by an artistic ad, please write the word "SEE" on a post card and send it in to us. If the written description of the product appeals more to you, write the word "SAY" on the card. Send it to The Ray Ewing Company, 1097 South Marengo Ave., Pasadena, California. To thank you for your time and opinion, The Advertising Manager will send you a Free copy of Ray Ewing's Handy Conversion Tables. Thanks in advance and please write that card today.

EXETER, NEW HAMPSHIRE

RADSON ENGINEERING CORP.
MACON, ILLINOIS

Cereal Grains Help Build Growing Livestock Economy

By Karl Brandt
Stanford University

The greatest and most consequential shift in the entire cereal economy of this country is the transfer of more and more grain to the feed trough. For agriculture in general the trend is toward more and more use of acreage through livestock.

This consumption shift has been possible only because of the change in the utilization of the total available supply of grain. As people curtailed their consumption of starch calories (from 225 lb. of wheat flour and semolina in 1879 down to 129 lb. in 1953) they increased their consumption of fats, a large part of which is produced by grain-consuming animals. Dairy cows supply most, followed by hogs, chickens and beef cattle, in that order.

In the free market economy it is the consumer who allocates the nation's resources by voting with dollars and cents through his purchases. Thus he exercises his prerogative of satisfying his wants according to his preference. This he has done with remarkable tenacity and effectiveness with reference to the cereal economy, by changing his diet as economic development created the need for it and gave him at the same time the rising purchasing power to exercise his changing preference.

According to Bennett's Law, discovered in 1941 by Dr. Merrill K. Bennett of Stanford University, nations change their diet, with rising income, toward a diminishing portion of calories from starchy staples. This is, with very few exceptions, a valid pattern of economic behavior throughout the world, particularly in the industrial parts of the West, foremost the U.S.—so much so that one can actually measure the degree of a nation's economic development and industrialization by Bennett's ingenious device of checking the proportion of starch calories in the national diet.

This conversion of grain through livestock into food consisting of animal products is a shift which greatly expands the capacity of the market for cereals. Anywhere from 70 to 90% of the calories in the feed are lost in the process of conversion to animal food products.

We had in 1956 a livestock herd worth $20 million, representing roughly 166 million grain-consuming animal units. Elimination of nearly 22 million horses and mules since World War I has also eliminated cereals consumption as fuel for traction. Today there are fewer than 3 million such animals. The total gain of grain set free for other uses amounts to over 20 million tons a year.

EDITOR'S NOTE: Keeping up to date on our nation's fast-changing economy is a breathtaking task, says Karl Brandt, author of the talk from which the portions appearing below were taken. Mr. Brandt, an agricultural economist and associate director of the Food Research Institute at Stanford University, reviewed what he termed "Dynamic Shifts in the American Cereal Economy," at the recent annual meeting of the American Association of Cereal Chemists in San Francisco.

Greater Supply

At the same time, the goal of higher yields and better performance for cereals has been approached from many sides. Factors such as new varieties, fertilization, insect, weed and disease control, irrigation, mechanization, artificial drying and bulk handling all have contributed to great advancements in yields.

In the 90 years since 1866, sorghum yields have increased 52%; corn by 50%; rice 47%; wheat by 45%; barley 29% and oats 28%. A 170% increase in grain acreage was accompanied by an increase of 267% in total output. At present the increase in yields tends to continue, while the acreage may stagnate or even recede for some years.

But while people and work animals have been using less cereal grains, there has been a great increase in the proportion of the supply for domestic use that has been fed to food-producing livestock. At the turn of the century, 54% of the U.S. crop was fed to food-producing livestock. The figure had jumped to 73% by 1950-52.

Most to Hogs

The main shift during the last 35 years in the utilization of grain fed to animals has been the allocation to dairy cattle and poultry of grain set free by the decline in the number of horses and mules. While the allocation changes from year to year, particularly because of changing hog numbers, it is a typical range of proportions within the feed balance

(Continued on page 80)

Pure whey supplement for your feeds:

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The fresh-dried whole whey that's naturally sweet

- no neutralizers added to upset milk mineral balance
- no fermentation to reduce high lactose content*

*Kraco is guaranteed at least 65% lactose—runs are usually between 70-72%

Kraco is made by Kraft—the country's largest producer of raw whey.

In processing this important feed supplement, Kraft uses the whey from low-acid cheese—and dries it within hours after it is drawn from the cheese vats.

For these two reasons, Kraco is *naturally* fresh, *naturally* sweet. Acid content is guaranteed at not more than 3.5%.

When you supplement your feeds with Kraco, you are using *pure* whey. Nothing has been added, nothing taken away.

Kraco contains all the whey nutrients, including the valuable whey factor, lactose (minimum 65%), milk protein (12%, mostly lactalbumin), milk minerals and B complex vitamins.

Ask the Kraft Man for full particulars.

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EXTRA FEED EFFICIENCY

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Your customers will like the extra feed efficiency they'll gain from Haven Granite Grit...designed to make the gizzard grind, it aids ready assimilation of every particle of your nutritious feeds.

Available in 6 graded sizes for every type of bird

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Ask the MERCK MAN about

MICROINGREDIENTS

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HIGH-ENERGY SWINE and POULTRY RATIONS

A curious but scientifically proved fact is that *the part of your feed which is the smallest in bulk* is the most important from a nutritional standpoint. Microingredients such as vitamins, minerals, antibiotics and amino acids may amount to only 0.005% of your finished feeds. Yet deficiency of a single amino acid or vitamin may prevent profitable performance of an otherwise well-formulated ration. Feed manufacturers interested in building a profitable business in the ever-expanding market for high-energy rations cannot afford to tolerate error in using microingredients. Right here is a sound reason for consulting a specialist in microingredients—the Merck man. He can give you valuable advice whenever you plan to change or improve your formulas.

BALANCED FORTIFICATION

gives your feeds Extra "Grow

Fifteen years ago the industry's best poultry rations contained four or five microingredients. Today's high-energy feeds *average* 24 to 25 microingredients . . . nearly every one essential for profitable and efficient feed conversion. When you consider that modern chicks do not hit a feed intake of an ounce per day until two weeks of age, you can begin to appreciate the vital importance of *balanced fortification*.

Merck Service has been developed to help every Merck customer achieve this goal as easily and profitably as possible. The immediate advantages of specifying Merck Microingredients stem from the characteristics that Merck carefully builds into its feed supplements. Merck Microingredients are offered in a wide variety of potencies in single and multiple mixtures to meet special formulation needs. Both active ingredients and carriers are processed to optimum particle size—assuring free flow and uniform distribution. The densities of components are matched to each other to prevent settling out, and the *p*H of all supplements is adjusted to afford maximum stability. In all cases, production-tested overages are incorporated to guard label claims. And as an added convenience, every Merck carrier is specially selected from nutritionally active feedstuffs to simplify labeling statements.

The long-term benefits of specifying Merck are perhaps less easily examined at first glance. Nevertheless, they are just as real and indeed critically important in today's markets. Because Merck is basic in more microingredients than any other manufacturer, you simplify purchasing by nominating Merck as your prime source of supply. At the same time, you are assured of

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with Merck Microingredients
-Power" in every growth period

reliable production because Merck is the world's largest manufacturer of vitamins and coccidiostats, and a major supplier of antibiotics, amino acids, hormones, and minerals. As a Merck customer, you can count on being first to enjoy the sales advantages of such scientific advances as Vitamin B_{12}, NICARB®, S. Q.®, and PRO-STREP®—all discovered by the largest research staff in the industry. And to help you exploit these discoveries, you can call on your Merck Man or, when necessary, the whole Merck technical service department. It's an industry-known fact: Merck customers are well off when help is needed to overcome any problem relating to the development, manufacture, labeling, analysis or marketing of modern feed. Perhaps this explains why so many in the industry look first to Merck when it comes to microingredients.

ANTIBIOTIC FEED SUPPLEMENTS

PRO-STREP®

PRO-PEN®

PRO-PEN® with B_{12} "2:3"

VITAMIN SUPPLEMENTS

SINGLE VITAMIN PRODUCTS

No. 52-S Calcium Pantothenate Mixture

No. 54 Riboflavin Mixture

Niacin (Nicotinic Acid U.S.P.)

No. 299 Niacin Mixture "50%"

Dry Mixture Choline Chloride

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Vitamin B_{12} Supplements

Vitamin B_{12} "6"

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MULTIVITAMIN MIXTURES

(Riboflavin-Calcium Pantothenate-Niacin-Choline Chloride Mixtures)

CUSTOM MIXES

Private formulations mixed to your order

WATER DISPERSIBLE MULTIVITAMIN MIXTURES

AMINO ACIDS

DL-Methionine Feed Grade

IODIDES

Potassium Iodide Mixture

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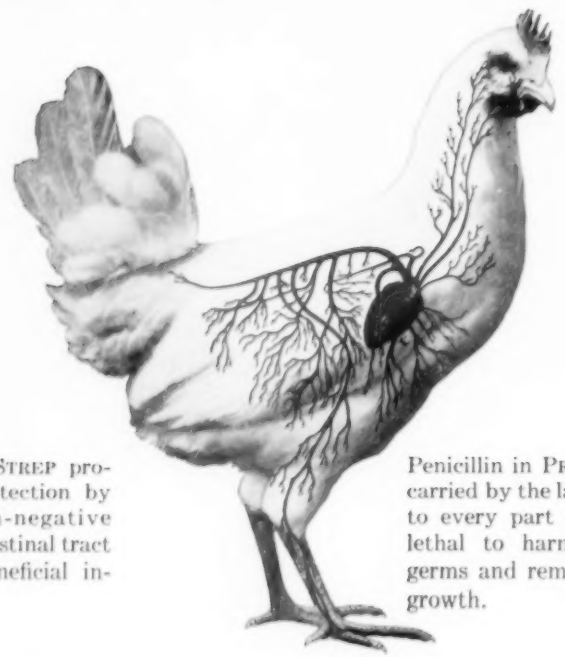
More disease fighting punch— *at up to $3.00 per ton LESS!*

Streptomycin in PRO-STREP provides crop-to-vent protection by killing harmful gram-negative germs in the layer's intestinal tract without disturbing beneficial intestinal flora.



Penicillin in PRO-STREP is rapidly carried by the layer's blood stream to every part of the body. It is lethal to harmful gram-positive germs and remarkably stimulates growth.

PRO-STREP®

with Broad-Spectrum, Synergistic Antibiotic Activity

Now build high-level antibiotic layer mashes that protect egg production during periods of stress

Two powerful antibiotics in PRO-STREP exert broad-spectrum activity to protect layers from crop to vent and through the system. Layer mashes with PRO-STREP are proved to restore egg production to normal after it has been depressed by disease or extremes in the weather, and to improve feed efficiency as well.

Compared to higher-priced antibiotics, PRO-STREP can save you as much as $3.00 per ton on finished feeds. Each pound provides 5 grams of procaine penicillin and 15 grams of streptomycin sulfate, recommended for mixing in feeds at the rate of 5 pounds per ton.

PRO-STREP is nontoxic, compatible with other microingredients, and leaves no tissue residue. It is shipped in 50-lb. multiwall bags from Rahway, N. J., St. Louis, Mo., and San Francisco, Calif. For more details, see your Merck representative or write to Merck & Co., Inc., Agricultural Chemical Sales, Chemical Division, Rahway, N. J.

PRO-STREP
benefits turkey feeds too

- ★ Reduces "early mortality" and cuts losses following periods of stress (vaccination, debeaking, chilling, moving or overheating).
- ★ Protects against bluecomb and speeds recovery during outbreaks.
- ★ Maintains feed intake and weight gains during recovery from bluecomb.
- ★ Improves weight gains and feed efficiency in poults.

® PRO-STREP *is the Merck brand of Procaine Penicillin and Streptomycin Sulfate.*

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MERCK & CO., INC. *Chemical Division* RAHWAY, NEW JERSEY

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Big or little—they'll "raid the feed room" for

Positive Coxy Protection*

It's in the bag
ONLY
when
NiCarb
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NiCarb®

(Nicarbazin, Merck)

Although it's true NiCarb is the only coccidiostat that cuts mortality to ZERO, complete protection against coxy mortality is only one of the reasons for using a coccidiostat. Just consider the many other benefits:

BROILERS—NiCarb is such a superior coccidiostat and has suppressed the incidence of coccidiosis so widely that people have assumed a coxy-free condition exists.

Outbreaks of coxy in flocks protected with inferior coccidiostats prove that coxy is still present and ready to kill. However, mortality is not the most costly part of this situation. Ineffective coccidiostats permit unrecognized SUBCLINICAL coxy to steal valuable weight gains.

Contrast this picture with the top market weight, fine finish, and feed conversion of as low as two pounds per bird that can accompany the regular use of feeds containing NiCarb. These benefits are the real economic reasons broiler operators report—there's just no profitable substitute for feeds containing NiCarb.

REPLACEMENTS—Poultrymen can count on economic gains fully as great as with broilers.

NiCarb fed for first 12-16 weeks makes it possible for egg producers to house more and healthier pullets than ever before. By eliminating death losses, tissue damage and poor feed conversion, NiCarb cuts a slice off production costs that comes back in the form of juicier profits. Furthermore, exposed birds protected with NiCarb can develop a solid immunity that prevents them from being knocked out by coxy.

NiCarb can do so much to build brand loyalty for your feeds that it's most short-sighted to let unrealistic fears block your just due. Remember, NiCarb is no more difficult to handle in the mill than many other micronutrients, hormones, enzymes and antiworming agents. While NiCarb should not be fed to layers in production, even effects on layers can be completely and quickly reversed merely by withdrawing the drug. And as far as other farm animals are concerned, ordinary concentrations of NiCarb are harmless. Your own economic interest makes it obvious—NiCarb should be included in all your starting mashes and grower feeds. Merck & Co., Inc. Chemical Division, Rahway, N. J.

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NiCarb — a product of MERCK
America's No. 1 Coccidiostat

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Ask the Merck Man

Want to cut down on wastage of the microingredients you use? Ask the Merck Man to show you how modern Merck packaging methods can minimize shipping losses and in-plant wastage. The Merck quality control people insist on the utmost care in packaging and labeling micronutrients —care that helps you use these ingredients more economically and with greater accuracy in your formulations.

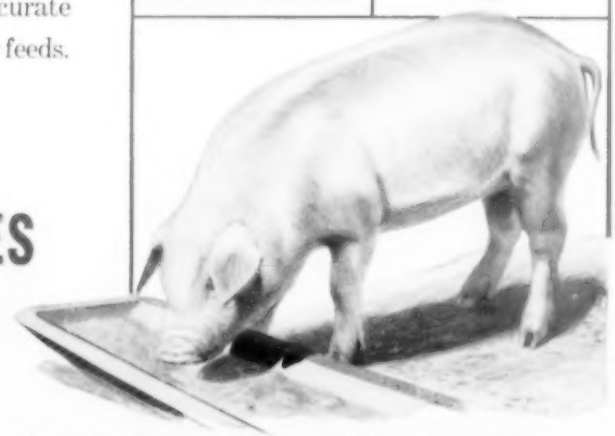
If you have special tonnage requirements for premixes, bring your problems to the Merck Man. He knows how Merck's flexible production facilities can fill your needs. After all, he represents a basic producer of more microingredients than any other firm. Merck sales offices are in Atlanta, Boston, Dallas, Kansas City, Los Angeles, Minneapolis, New York, Philadelphia, St. Louis, San Francisco.

Double Check Indispensable B_{12} Levels in your Poultry and Swine Rations

Vitamin B_{12} is so essential for the proper performance of all types of poultry and swine rations that it deserves special attention. In these days of increased use of high energy, B_{12}-poor feedstuffs, it is increasingly difficult to add enough B_{12}-rich natural feedstuffs economically. At the same time the B_{12} content of natural materials is highly variable.

When you rely on Merck Vitamin B_{12} Supplements, you can count on getting absolutely the precise amount of B_{12} called for by your formula. The B_{12} will not only be there in the ration but it will be 100 per cent biologically active. This assures maximum feed efficiency economically because less overage is required, and you can get by with less expensive animal protein. Three different Merck Vitamin B_{12} Mixtures are available to meet your special need. All three are specially formulated to facilitate accurate mixing and uniform distribution in your feeds.

Type of ration	Recommended levels of vitamin B_{12} in micrograms/lb.
POULTRY	
Broiler	10
Chick Starter	10
Chick Grower	10
Layer	10
Chick Breeder	10
SWINE	
Starter-Prestarter	20
Grower	10
Breeder-Lactation	5



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Research and Production for Better Poultry and Animal Health

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America's No. 1 Coccidiostat

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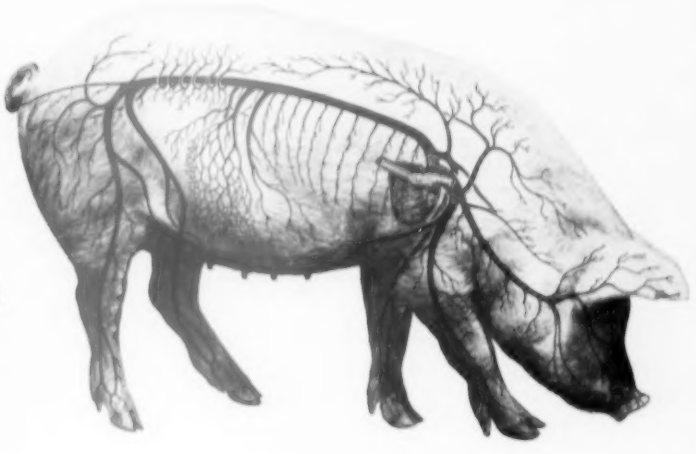

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Information on Dried Citrus Pulp in Dairy Cow Rations Outlined

COLLEGE STATION, TEXAS—Information on the value of dried citrus pulp in dairy cattle rations was provided by Prof. R. E. Leighton in a recent issue of the Texas Feed Service Report, published quarterly for feed men by the Texas Agricultural Experiment Station.

Prof. Leighton cited Texas work in 1942 and 1944 indicating that, except for palatability, dried citrus pulp is about equal to dried beet pulp or ground ear corn with husks for cattle. Because of the palatability problem, it was recommended that less than 50% of the concentrate ration consists of dried citrus pulp.

The feeding value for dairy cattle of dried citrus pulp, in terms of productive energy, was 74.4 therms, compared with 74.7 therms for corn and cob meal (without husks). The difference in milk production on the two rations was greater than is indicated by these two values because the cows consumed larger amounts of feed when on the ration containing corn and cob meal. The two concentrate rations differed only in that one contained 50% corn and cob meal and the other contained 50% dried citrus pulp.

Milk production by cows receiving as much as 50% dried citrus pulp in their concentrate ration in these tests had no off flavors. However, other reports indicate that dried citrus pulp that has undergone fermentation because of a high moisture content, caused by rain or incomplete drying, has produced a noticeable flavor in the milk.

Considering the results of this research, and the net energy values given in the 22nd edition of Morrison's Feeds and Feeding, the following conclusions are based on the relative productive energy value of dried citrus pulp (DCP), as compared with ground sorghum grain (GSG), corn meal (CM) and molasses (M) for dairy cows:

FEED		COMPARATIVE DOLLAR VALUE		
GSG	$1.50	$2.00	$2.50	$3.00
CM	1.54	2.05	2.56	3.08
M	1.36	1.82	2.28	2.73
DCP	1.44	1.92	2.40	2.88

To illustrate the use of this table: When molasses cost $1.36 per hundredweight, dried citrus pulp is worth $1.44 per hundredweight within its palatability limits.

However, in terms of digestible protein furnished, 100 pounds of sorghum grain are equivalent to any of the three following combinations: 80 pounds of dried citrus pulp plus 20 pounds of cottonseed meal, 74 pounds of molasses plus 26 pounds of cottonseed meal or 93 pounds of corn meal plus 7 pounds of cottonseed meal.

Kansas Handy Man Builds Elevator

BROUGHTON, KANSAS—Vincent Hoover, owner of the Broughton Grain Co. is a "do it yourself" elevator operator. He has completed the erection of a 10,000-bu. elevator and each of the individual concrete slabs in the structure was made by himself. After the slabs were poured in the ground molds, Mr. Hoover hired a crane operator to put them into position.

A Wichita, Kansas, firm designed the elevator but all construction details were handled by Mr. Hoover.

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MARSHALLTOWN, IOWA—Young Feed Store, Inc., here has been selected as one of 14 agricultural businesses to train Iowa State College students this summer as part of their agricultural business curriculum.

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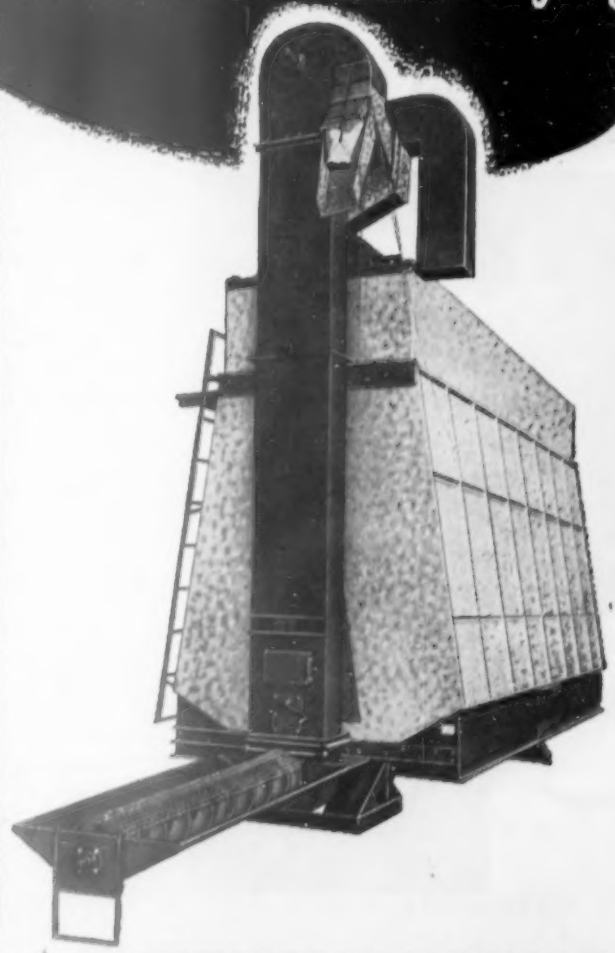

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Recent Advances in Nutrition of Dairy Cows and Calves

By Dr. J. K. Loosli
Cornell University

EDITOR'S NOTE: In the accompanying article, Dr. Loosli, professor of animal nutrition at Cornell University, reviews advances in nutrition which have helped bring increased milk yields, and he points out some of the problems which remain. He deals with the feeding of both calves and dairy cows. This article is the text of a paper presented at the annual research conference sponsored by Chas. Pfizer & Co., Inc., at its agricultural research and development center at Terre Haute, Ind.

v v

The level and efficiency of milk production in the U.S. has increased consistently during the past 50 years. Further progress in the breeding, management and feeding programs for dairy cattle will result in a continuing increase in average production. The purpose of this review is to summarize the important advances in nutrition which have been responsible for the increased milk yields and to mention some of the problems which remain.

Nutritional progress over the past 50 years in this field was recently reviewed by Reid (1956) and Huffman (1956), and the application of current knowledge to feeding standards and the practical feeding of dairy cattle has been set forth by the National Research Council (Loosli et al., 1956).

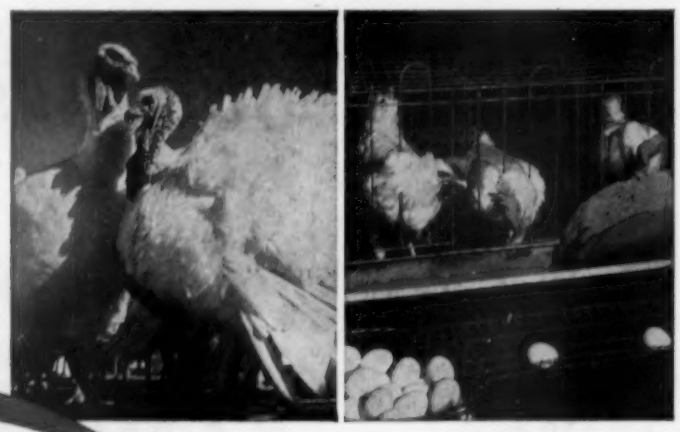
Rumen Development and Function

An active area of research involving the growth and development of dairy calves and proper feeding of milking cows concerns the influence of various dietary factors on rumen development and function. Current interest was stimulated by studies at the Ohio Experiment Station showing that inoculation of calves with fresh cud material from healthy cows resulted in the earlier appearance in the rumen of types of microorganisms characteristic of those in mature animals. These anaerobic bacteria are not found outside of the rumen, and it appears, therefore, that transfer from the adult to the young is necessary to get the proper culture.

Dr. J. K. Loosli

Early tests suggested that cud inoculation reduced the incidence of scours and improved the general health and performance of calves. However, Pelissier et al. (1954) reported that inoculation with fresh cud material failed to increase the growth rate of calves, to reduce the incidence of scours or to improve their general appearance. More recent studies by Bryant and Small (1956) "indicate that inoculation of calves hastens the development of rumen protozoa but will not hasten the development of bacteria typical of the mature rumen unless the calves are raised under rather strictly isolated conditions."

The present status of this question is aptly summarized by Hibbs et al. (1956, 1957) as follows: "Our data thus far indicate that cud inoculations



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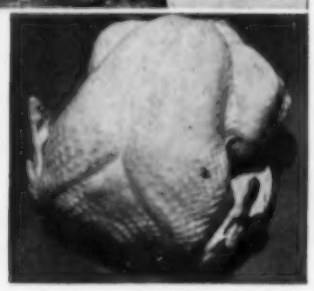

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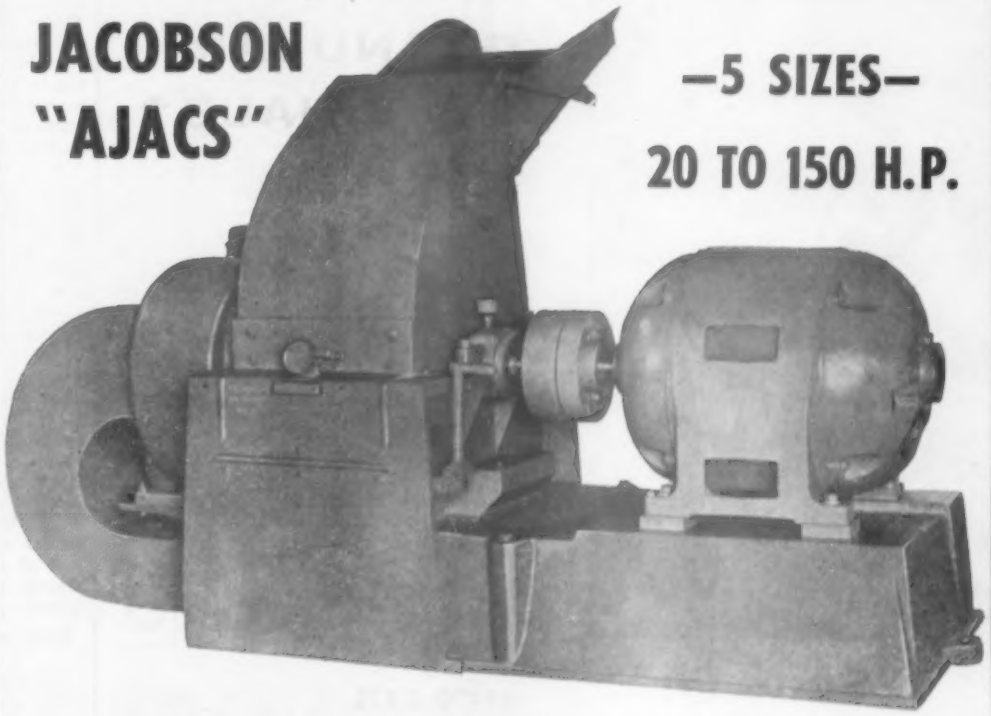

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do not result in increased growth or better performance when good quality hay is fed with a simple grain mixture. Dried rumen preparations have been found to be of no value in establishing rumen microorganisms or in improving calf performance." These conclusions are in agreement with tests at Penn State (Williams and Jensen, 1954) and at Cornell (Loosli, 1957) in which the addition of a commercially available dried rumen preparation failed to improve the rate of gain and the general appearance or the health of calves fed milk replacements. The data available are limited and should be extended before it is concluded that inoculums have no value, especially in view of the favorable results of Pfander (1956) with beef steers.

According to popular belief it is necessary to feed large amounts of hay or other roughage to growing calves and heifers in order to stimulate rumen growth and to develop cows having the ability to convert maximum amounts of roughage into milk. There are no experimental data which conclusively show whether or not the roughage-consuming capacity of a mature dairy cow is primarily inherited or largely a function of dietary habits acquired as a calf and heifer. Warner et al. (1956) have presented data which clearly show that the growth and development of the rumen proceeds as rapidly on a ration of concentrates as on hay alone or a mixture of concentrates and hay up to four months of age. They showed that on whole milk there was little or no rumen development nor did the presence in the rumen of bulk in the form of nylon sponges or bristles stimulate the growth of rumen tissue. Thus it is clear that bulk per se is not necessary for early rumen development, but the presence of dry matter fermentable by bacteria seems essential. Similar studies have not been extended from the early months to maturity, a procedure which seems necessary for a final answer.

In vitro tests have shown that valeric acid (Bentley et al., 1955), certain amino acids such as valine, proline, leucine and isoleucine (Dehority et al., 1957), some of the trace mineral elements and the ash from alfalfa, also certain of the B vitamins, will stimulate the digestion of cellulose when they are tested under laboratory conditions with mixed cultures of rumen microorganisms (MacLeod and Murray, 1956). Attempts to demonstrate increased performance of ruminants from the addition of these factors to the diet have given negative results to date (Hungate and Dyer, 1956; Klosterman and Bentley, 1957). A challenge remains to the research worker to find a combination of nutrients which will stimulate optimum utilization of poor quality feeds as well as feeds of high quality.

Raising Dairy Calves

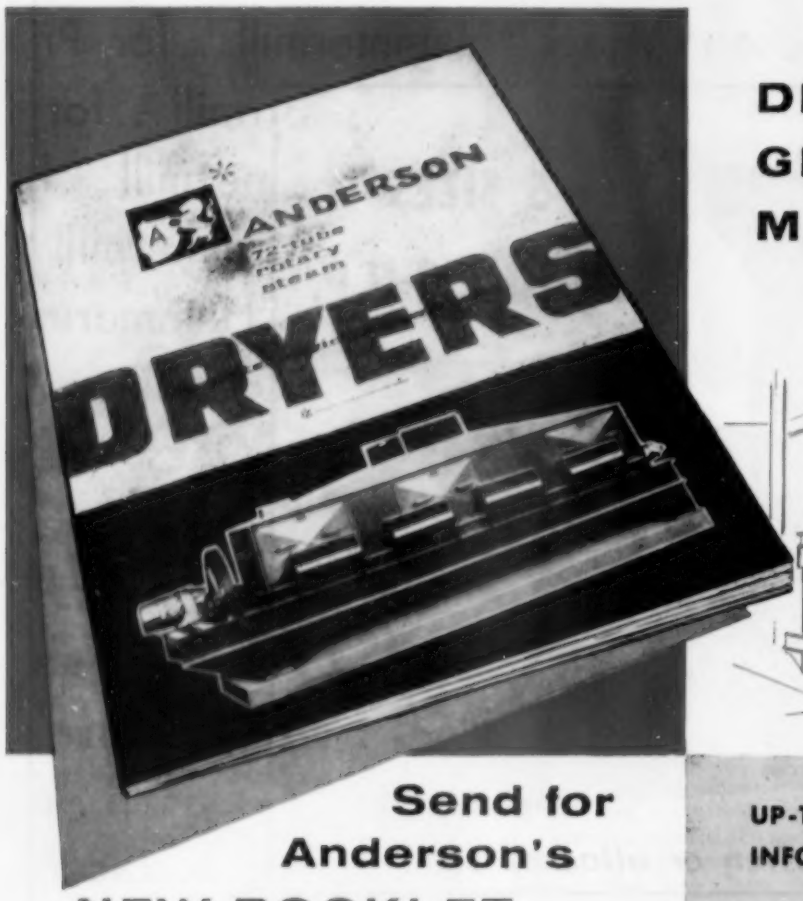
One of the biggest economic problems of dairymen is the cost of raising heifers to productive age, and the short productive life of the cow. The Ohio Station (Hibbs et al., 1957) has strongly recommended a high roughage system of raising herd replacements. Briefly this system includes the use of about 450 lb. of whole milk for Holstein calves and the controlling of feed intakes so as to maintain a ratio of two parts of hay for each part of concentrate. There is usually economy in the liberal use of roughages, but not always, and when one recommends the use of pelleted roughage as they have, the economy factor may be lost. The feeding of high quality roughage is essential to the system. Sufficient numbers of calves have been reared by the Ohio system that one can be confident it will give them satisfactory results. It seems very doubtful however, that this system is any cheaper or otherwise better than several others in wide use.

At least two other systems which differ widely from the Ohio system are in wide use at present. These include (a) the Ralston Purina method which uses milk or a milk replacement and a dry calf starter without roughage during the first eight weeks, and (b) the limited whole milk-calf starter system which allows both hay and a starter free choice, first reported by Mead (1924) and popularized by the Cornell group (Savage and McCay, 1942; Turk and Burke, 1949). While all of these feeding systems and modifications of them give acceptable results, there is no convincing evidence that any one system surpasses the other in terms of its influence on lifetime production, reproduction or efficiency.

A number of dry mixtures have been formulated which can replace fluid whole milk in the nutrition of calves starting at 3 to 10 days of age. Most products now available on the market are high in milk by-products. They usually do not allow as rapid gain in weight as whole milk, but the gain is fast enough to be satisfactory to most dairymen (Williams and Knodt, 1950; Wallace et al., 1951; Warner and Loosli, 1955). The problem with these dry feeds is that they are low in fat content, and thus they furnish far less energy per pound than the solids of whole milk. Attempts to feed as much energy as calves obtain from whole milk usually cause scours from overfeeding. The problem of adding adequate fat to dry replacers for milk has not been solved.

Plane of Nutrition and Productive Ability

Evidence has begun to accumulate from studies in Denmark, New Zealand and at Cornell University (Reid et al., 1957) that optimum productive and reproductive performance may not result if dairy heifers are fed at such a high plane of nutrition that rates of gain are maximal. In each



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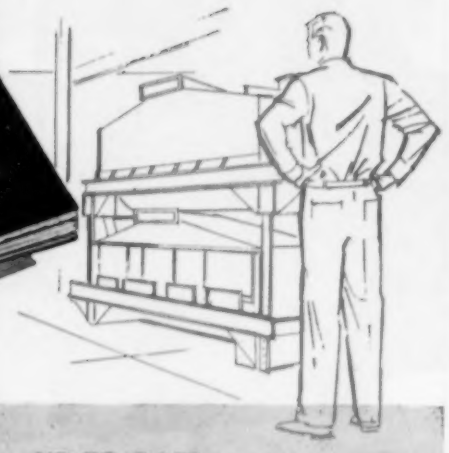

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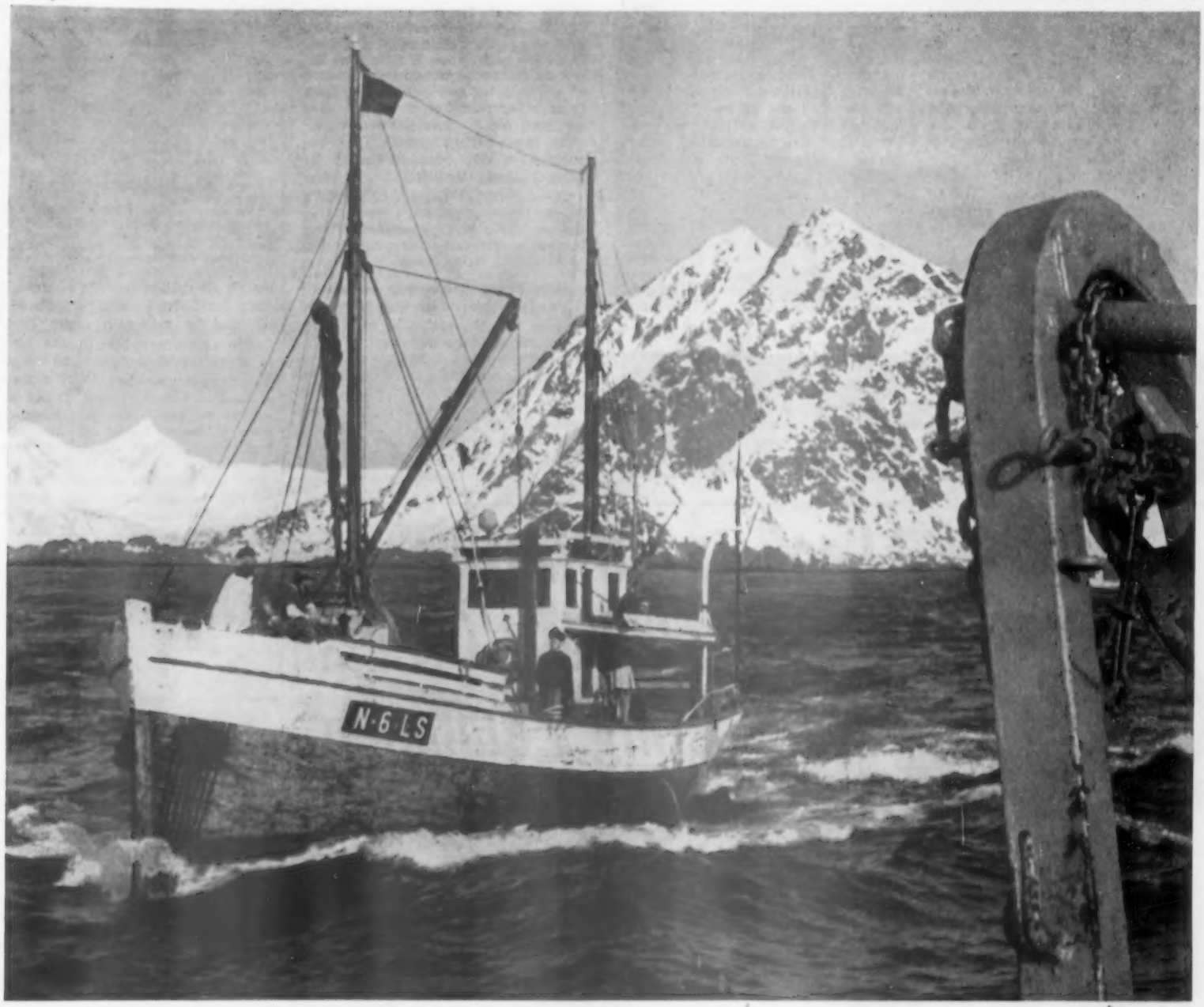

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of these separate experiments heifers fed from birth to first calving on the lowest plane of nutrition were capable of more efficient reproductive performance and gave higher milk yields after the first lactation. The results to date of the Cornell studies involving some 30 Holstein cows in each of three groups are shown in Table 1.

It is evident that the high plane of nutrition (140% of normal TDN requirements) resulted in earlier sexual maturity than the medium (100%) or the low plane (65% of normal TDN). In this study the heifers were bred at 18 months of age or at the first estrus following that age. Under this management the heifers on the high plane of nutrition were nearly 50% heavier at first calving than those on the low plane. The milk production during the first lactation was approximately the same for all three groups. In later lactations the cows fed on the lowest plane of nutrition until first calving produced the most milk. These cows will be continued on test during their useful life span, and final results will not be available for several years, but it is clear that the high plane of nutrition is too expensive to pay off in practical dairying.

In considering the possible role of nutrition on reproductive performance of animals, and especially in characterizing procedures for predicting reproductive efficiency, it is interesting to note the report of Brochart (1956) in France that the calcium and phosphorus content of the hair from the poll region is a reliable index of the reproductive performance of dairy cows and heifers. Samples from other parts of the body were reported not to give results having value in predicting fertility. These results have not been confirmed by other research workers.

Keener (1957) has presented data suggesting that feeding ladino clover hay as the sole roughage over long periods may result in low conception rates among dairy cows.

TABLE 1. Average data on the influence of plane of feeding on the growth and performance of Holstein cattle
(Reid et al., 1957)

Item	Plane of Nutrition† Low‡	Medium	High
Feed Intakes			
Milk, lb.	189	368	2,008
Grain, lb.	968	1,930	5,357
Hay, lb.	6,176	7,455	6,847
Pasture, days	324	232	223
Feed Cost	$136	$223	$404
Age at First Heat, mo.	15	11	9
Weight After Calving			
First, lb.	876	1,058	1,209
Fourth, lb.	1,435	1,410	1,532
Milk Production			
First lactation, lb.	9,000	9,352	9,193
Fourth lactation, lb.	12,416	10,621	11,044

† After first calving, all animals were well fed.
‡ Low 65%, medium 100% and high 140% of Morrison's TDN standard.

Milk Fever (parturient paresis)

Until recently it was common opinion that the ration of cows bore no relationship to the onset of milk fever. The studies of Hibbs and Pounden (1955) and Boda and Cole (1956) have demonstrated that feeding vitamin D and regulating calcium : phosphorus ratios may aid in the prevention of milk fever. The former workers have published convincing evidence that the feeding of approximately 30 million I. U. of vitamin D_3 daily for 5 to 7 days prepartum is effective in preventing milk fever. Calcium concentration in the blood serum falls at parturition and the onset of milk secretion. Cows fed the massive doses of vitamin D did not exhibit as low levels of calcium as control cows. Using calcium and phosphorus, it was shown that massive doses of vitamin D increased calcium and phosphorus absorption and decreased endogenous losses (Conrad et al., 1956). There remains a problem of estimating the day of parturition so as to avoid unduly prolonged feeding of the vitamin.

Studies at California (Boda, 1956) have shown that feeding low-calcium high-phosphorus prepartum diets for a month before calving will reduce the incidence of milk fever. Full control has not resulted, and there appears to be a problem in obtaining a low-calcium ration with satisfactory palatability for desirable weight gain during the dry period.

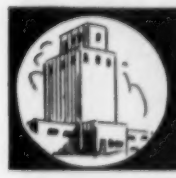
Ketosis

While the feeding of propionate and related materials controls many cases of ketosis (Schultz, 1954), there are problems relating to its use. Clinical use of the corticoids (Shaw, 1956) usually gives effective cures. There are recent claims that high-protein diets and trace mineral elements are effective in prevention, but these reports can be questioned because adequate controls were not maintained.

At this writing no one has consistently produced or prevented ketosis by dietary manipulation or control, and therefore there remains a question as to whether diet is as important as general metabolic regulation and stress.

Bloat

Bloat is a problem of great economic importance for dairy cattle and sheep in some areas. The losses become more serious with improved pasture management and the growth of larger proportions of legumes, especially ladino clover and alfalfa. The specific physiological cause of bloat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remains unknown despite increased recent study and thus prevention or cure remains difficult. The recent findings of Barrentine et al. (1956) that feeding penicillin reduced the incidence or prevented bloat in grazing cattle offer some promise of a practical control. The recent literature on bloat was reviewed and evaluated by Cole et al. (1956).

Antibiotics

Reid et al. (1954) and Lassiter (1955) have reviewed the research on the use of antibiotics for ruminants. Calves show a growth response similar to that observed with poultry and swine. Chlortetracycline and oxytetracycline seem to be the most effective antibiotics in stimulating growth at low level feeding.

Streptomycin appears to help reduce scours in calves to about the same extent as chlortetracycline and oxytetracycline, and although it stimulates the growth of calves, there remains some doubt that it is as effective as the latter antibiotics in this regard (Hogue et al., 1957). Penicillin and Bacitracin alone or in combination have little growth stimulating effect for calves, but they may help control scours, a serious problem with this species.

The recent report of Landagora et al. (1956) that calves reared in a new environment under clean and sanitary conditions showed marked

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growth stimulation at two weeks of age, compared with four weeks for calves housed in a barn used repeatedly, supports the theory that antibiotics function in metabolism rather than largely by controlling the disease level. These workers summarize the question in calves, which remains unsolved.

Digestion and balance studies have been made by several research groups to test the influence of antibiotics. Bartley et al. (1956) observed slight increases in nutrient digestion by calves fed milk alone, but on milk and oats fiber digestion was depressed. Alfalfa seemed to overcome the depression. Hogue et al (1956) reported that chlortetracycline increased the digestion and retention of protein, but other nutrients were not influenced.

In vitro tests have often shown lowered cellulose digestion by rumen microorganisms from direct addition of antibiotics and by cultures from animals fed antibiotics (Lodge et al., 1956). Studies with animals tend to discredit the laboratory tests as having little practical importance in feeding dairy calves.

"Which one is Grade A?"

Limited studies with milking cows (Rusoff and Haq, 1954; Warner, 1952) have failed to demonstrate any benefit from the addition of antibiotics to usual rations. Low-level feeding has not been harmful and has not contributed measurable amounts of antibiotic activity to the milk.

Arsenicals and surface active agents have not shown promise as additives to feeds for young dairy calves (Voelker et al., 1954; Owen et al., 1955; Bartley et al., 1956).

Animal Fats in Feeds

The use of animal fats in rations for dairy calves and cows has received less attention than is true for poultry and swine. Using milking cows, Horton et al. (1956) found satisfactory palatability of grain mixtures containing stabilized animal fats to increase the total fat contents to 8% and 12%. Neither milk yield nor the fat percentage of the milk was altered by the added fat. Although the results were fully satisfactory both during barn feeding and on pasture, they do not suggest that the added fat contributed as much useful energy as might be expected. Johnson et al. (1956) have studied inedible tallow for dairy calves. Additions of 2.5%, 5.0% and 10% of tallow to dry calf starters resulted in faster rates of gain and reductions in the amounts of feed per pound of gain. Poorer digestion of the protein and

(Continued on page 70)

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CONVENTION CALENDAR

July 28 - Aug. 1 — Southeastern School of Management for the Poultry Industry (second session); University of Georgia, Athens, Ga.; sponsored by the university and Southeastern Poultry & Egg Assn., 615 E. Franklin St., Richmond 19, Va.

July 31 - Aug. 2 — West Virginia Poultry Convention & Festival; Moorefield, W. Va.; chm., Ted R. Hash, extension poultryman, West Virginia University, Morgantown, W. Va.

Aug. 11-13 — Georgia Feed Assn.; Radium Springs, Albany, Ga.; sec., Will L. Kinard, 3240 Peachtree Road Bldg., Atlanta 5, Ga.

Aug. 13-14—Mutual Millers & Feed Dealers Assn. summer convention; Jamestown, N.Y.; sec., Mrs. Gustavus A. Bentley, 41 Chautauqua Ave., Jamestown, N.Y.

Aug. 15-16 — New England Feedmen Conference; University of Connecticut, Storrs, Conn.; sec., George E. Durgin, Box 345, Wakefield, Mass.

Aug. 19-20 — Kentucky Feed & Grain Assn.; Sheraton-Seelbach Hotel, Louisville, Ky.; sec., Fred H. Schardt, P.O. Box 1914, Louisville 1, Ky.

Aug. 19-20 — Wisconsin Nutrition School for Feed Men; Memorial Union, University of Wisconsin, Madison, Wis.; co-chm., Gus Bohstedt and Robert H. Grummer, Department of Animal Husbandry.

Aug. 19-22 — Georgia Poultry Institutes; Rock Eagle 4-H Center, Eatonton, Ga.; chm., J. H. Massey, extension poultryman, University of Georgia, Tifton, Ga.

Aug. 23—Purdue Swine Day, Purdue University, Lafayette, Ind.; co-chm., Dr. M. W. Beeson and J. H. Conrad, Animal Husbandry Department.

Aug. 26 — National Soybean Processors Assn.; Leamington Hotel, Minneapolis, Minn.; pres., R. G. Houghtlin, 3818 Board of Trade Bldg., Chicago 4, Ill.

Aug. 27-28 — American Soybean Assn.; Leamington Hotel, Minneapolis, Minn.; exec. v.p., George M. Strayer, Hudson, Iowa.

Sept. 8-10—Grain & Feed Dealers National Assn.; Commodore Perry Hotel, Toledo, Ohio; sec., John C. Bowden, 100 Merchants Exchange Bldg., St. Louis 2, Mo.

Sept. 9-10—Minnesota Animal Nutrition Short Course; University of Minnesota, St. Paul Campus; chm., Dr. Elton L. Johnson, Department of Poultry Husbandry.

Sept. 11-12 — Michigan State Hatchery Conference; Michigan State University, East Lansing, Mich.; chm., Harry E. Hathaway, Michigan State Poultry Improvement Assn., East Lansing, Mich.

Sept. 11-13 — American Pet Food Manufacturers; Drake Hotel, Chicago; sec., R. L. Kathe, APFM Division of American Feed Manufacturers Assn., 53 W. Jackson Blvd., Chicago 4, Ill.

Sept. 12—Illinois Turkey Growers Assn.; Harvey Wenzel Turkey Farm, Garden Prairie, Ill.; sec., Howard Kauffman, Waterman, Ill.

Sept. 12-13—Iowa Nutrition Conference; Iowa State College, Ames.

Sept. 16-17 — National Renderers Assn., Seventh Regional Area; Statler-Hilton Hotel, Dallas, Texas; sec., Robert G. Day, Tulsa Rendering Co., Collinsville, Okla.

Sept. 17 — North Dakota Turkey Federation; Devils Lake, N.D.; sec., Irving J. Mork, Poultry Husbandry Department, North Dakota Agricultural College, State College Station, Fargo, N.D.

Sept. 18-20 — National Mineral Feeds Assn.; Sheraton Hotel, Chicago; sec., Peter W. Janss, 212 Equitable Bldg., Des Moines, Iowa.

Sept. 26-27 — Arkansas Formula Feed Conference; University of Arkansas, Fayetteville; chm., Dr. E. L. Stephenson, Animal Industry Department.

Oct. 2—Vermont Feed Dealers and Manufacturers Assn.; University of Vermont, Burlington, Vt.; sec., D. C. Henderson, Poultry Department.

Oct. 3-4—Texas Nutrition Conference; Texas A&M College, College Station; chm., Dr. J. R. Couch, Poultry Science Department.

Oct. 4-5—Texas Formula Feed Conference; Texas A&M College, College Station.

Oct. 8-10 — Northeastern Poultry Producers Council Poultry Exposition and Convention; Farm Show Bldg., Harrisburg, Pa.; chm., Alfred Van Wagenen, NEPPCO, 10 Rutgers Place, Trenton 8, N.J.

Oct. 10-12 — National Renderers Assn.; Hotel Statler, Los Angeles, Calif.; sec., Miss Jamie C. Fox, National Renderers Assn., 30 N. LaSalle St., Chicago 2, Ill.

Oct. 14-16—Virginia State Poultry Federation; Hotel Roanoke, Roanoke, Va.; chm., J. Paul Williams, 615 E. Franklin St., Richmond 19, Va.

Oct. 16-17—Association of American Feed Control Officials, Shoreham Hotel, Washington, D.C.; exec. sec., L. E. Bopst, Room 036 New Chemistry Bldg., University of Maryland, College Park, Md.

Oct. 17-18 — Michigan Feed and Grain Conference; Kellogg Center, Michigan State University, East Lansing; sec., John A. Krusoe, Box 472, East Lansing, Mich.

Oct. 18—Nebraska Feed and Nutrition Conference; University of Nebraska, Lincoln, Neb.; chm., W. J. Loeffel, Department of Animal Husbandry.

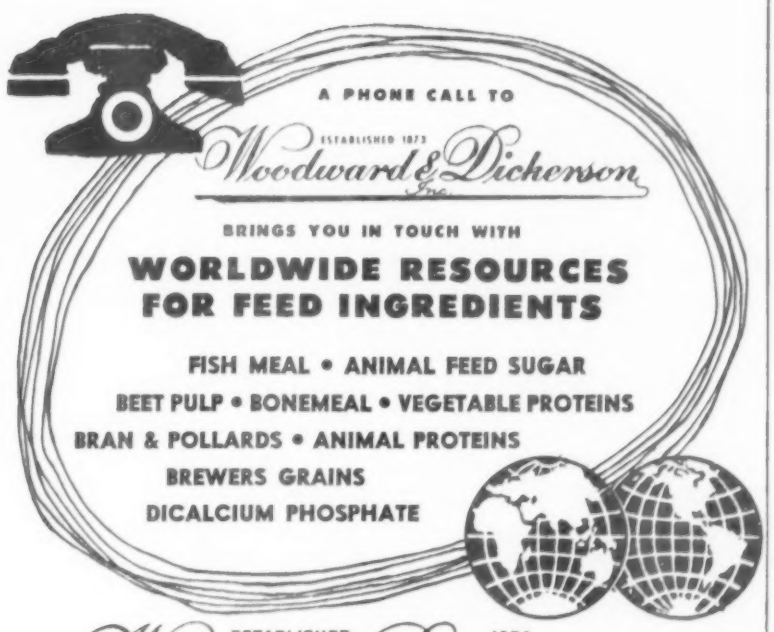
Oct. 21-22—California Animal Industry Conference; Memorial Auditorium, Fresno, Cal.; chm., Emery A. Johnson, Box 23415, Lugo Station, Los Angeles 23, Cal.; sec., California Hay, Grain & Feed Dealers Assn., John F. Gilmore, 1400 Tenth St., Sacramento 14, Cal.

Oct. 22-23—Indiana State Poultry Assn.; Hotel Antlers, Indianapolis, Ind.; chm., Robert L. Hogue, Poultry Building, Purdue University, Lafayette, Ind.

Oct. 24-25 — Oklahoma Formula Feed Conference; Oklahoma A&M College, Stillwater; chm., Dr. Rollin Thayer, Poultry Husbandry Department.

Oct. 25—Illinois Sheep Production Day; University of Illinois, Urbana;

(Continued on page 44)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Oct. 27-Nov. 2 — Southeastern School of Management for the Poultry Industry (third session); University of Georgia, Athens, Ga.; sponsored by the university and Southeastern Poultry & Egg Assn., 615 E. Franklin St., Richmond 19, Va.

Oct. 31-Nov. 1 — Cornell Nutrition Conference for Feed Manufacturers; Statler Hotel, Buffalo, N.Y.; chm., Prof. J. K. Loosli, Stocking Hall, Cornell University, Ithaca, N.Y.

Nov. 1 — Illinois Cattle Feeders Day; University of Illinois, Urbana; chm., Dr. A. L. Neumann, 110 Stock Pavilion, Urbana, Ill.

Nov. 5-6—Missouri Formula Feed Conference; University of Missouri, Columbia.

Nov. 7-8 — Florida Nutrition Conference; University of Florida, Gainesville; chm., J. P. Feaster, Department of Animal Husbandry and Nutrition.

Nov. 17-18—Tennessee Feed Manufacturers Assn.; Peabody Hotel, Memphis, Tenn.; exec. sec., W. H. Levine, 200 Baxter Bldg., Nashville, Tenn.

Nov. 20-22—Midwest Feed Production School; Municipal Auditorium, Kansas City; sponsored by Midwest Feed Manufacturers Assn.; exec. v.p., Lloyd S. Larson, 20 W. 9th St. Bldg., Kansas City 5, Mo.

Nov. 22-27 — North Carolina Feed Manufacturers Assn. and allied group convention-cruise to Nassau; chm., W. G. Crawford, Goldsboro Milling Co., Goldsboro, N.C.

Nov. 25-26—Western Grain & Feed Assn.; Hotel Fort Des Moines, Des Moines, Iowa; sec., Mark G. Thornburg, 928 Des Moines Bldg., Des Moines 9, Iowa.

1958

Jan. 6-7 — Kansas Formula Feed Conference; Kansas State College, Manhattan, Kansas; chm., Prof. F. W. Atkeson, Department of Dairy Husbandry.

Jan. 7-9—National Turkey Federation; Keil Auditorium, St. Louis, Mo.; sec., E. M. Funk, Mt. Morris, Ill.

Jan. 22-25—Boston Poultry Show; Mechanics Bldg., Boston, Mass.; sec., Alfred Van Wagenen, Northeastern Poultry Producers Council, 10 Rutgers Place, Trenton, N.J.

Jan. 27-29 — Southeastern Poultry & Egg Assn.; Municipal Auditorium, Atlanta, Ga.; headquarters hotel, Dinkler Plaza; exec. sec., J. Paul Williams, 615 E. Franklin St., Richmond 19, Va.

Feb. 3-5—Association of Southern Agricultural Workers; Hotel Marion, Little Rock, Ark.

Feb. 6-7—Oregon Animal Industry Conference; Oregon State College, Corvallis, Ore.; gen. chm., Fred West, Oregon Feed & Seed Dealers Assn., college chm., Dr. J. E. Oldfield, Department of Animal Husbandry.

Feb. 13-14 — Washington State Feed Assn.; Chinook Hotel, Yakima, Wash.; sec., J. G. Wilson, 814 Second Avenue Building, Seattle, Wash.

Feb. 14-16—Institute of American Poultry Industries Fact Finding Conference; Municipal Auditorium, Kansas City, Mo.; sec., Dr. Cliff D. Carpenter, 221 N. LaSalle St., Chicago 1, Ill.

Feb. 23-25 — Ohio Grain & Feed Dealers Assn.; Commodore Perry Hotel, Toledo, Ohio; sec., G. E. O'Brien, Ohio St., Greenville, Ohio.

Feb. 24-27 — Colorado Livestock Days; Colorado State University, Fort Collins, Colo.; sec., Dr. Sherman S. Wheeler, director of the experiment station.

Feb. 25-26 — Virginia Polytechnic Institute Nutrition School for Feed Men; Hotel Roanoke, Roanoke, Va.; chm., Paul M. Reaves, professor of dairy science.

Feb. 26-28—Midwest Feed Manufacturers Assn.; Muehlebach Hotel, Kansas City; exec. v.p., Lloyd S. Larson, 20 W. 9th St. Bldg., Kansas City 5, Mo.

May 18-23—Grain Elevator & Processing Superintendents; Minneapolis, Minn.; sec., Dean M. Clark, 1115 Board of Trade Building, Chicago 4, Ill.

May 21-23—American Feed Manufacturers Assn.; Morrison Hotel, Chicago; sec., W. T. Diamond, 53 W. Jackson Blvd., Chicago 4, Ill.

New Poultry Plant to Open in Arkansas

SPRINGDALE, ARK. — A new $500,000 poultry processing plant will be built here by late September, according to Ed Kander of Kansas City, vice president of the Edward Aaron Processing Co.

The new plant will employ 250 persons and is to have a production capacity of 45,000 birds a day, said Mr. Kander. The firm is a subsidiary of U.S. Cold Storage Co., and also has plants at Rogers, Ark.; Lamar, Mo. and Ft. Scott, Kansas.

TREATED SEED CORN

South Dakota State College has issued a reminder that treated seed corn should not be fed to chickens. The college cites Minnesota research showing that corn treated with Arasan is dangerous for poultry. Rations containing less than 10% of the levels of Arasan on treated seed corn produced poor growth, leg weakness, lower egg production and soft shelled eggs.

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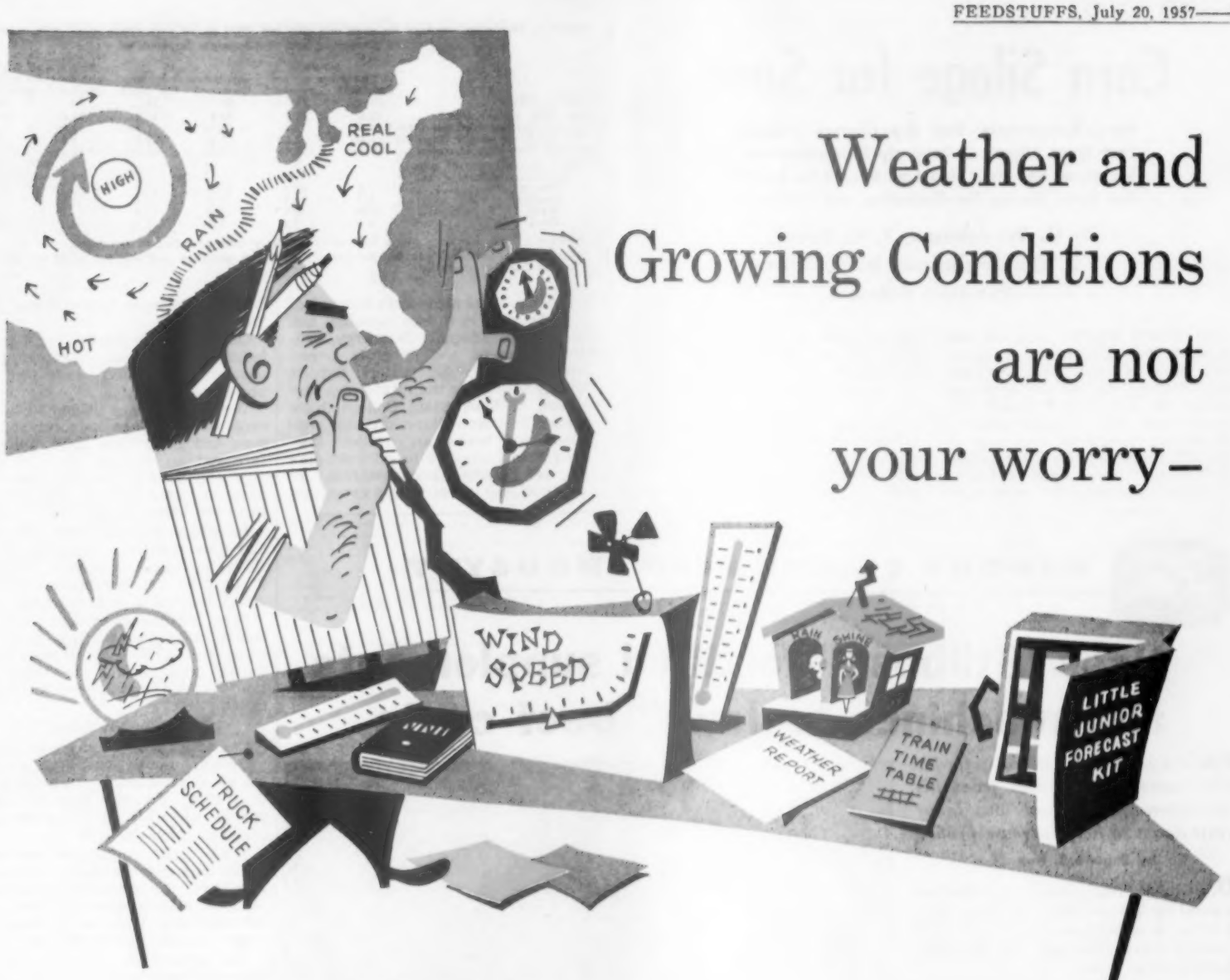

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Corn Silage for Sows

Iowa Researchers Say Experiments Indicate That Corn Silage — Properly Supplemented— Makes an Excellent and Low-Cost Base Ration For Sows During Pre-Gestation and Gestation

By C. W. Johnson, V. C. Speer, C. C. Culbertson and D. V. Catron
Iowa State College

EDITOR'S NOTE: A good deal of work with corn silage for pregnant sows has been done at Iowa State College. In the accompanying article, the researchers review the studies and make recommendations on feeding programs involving silage. This article is from the college publication "Iowa Farm Science." Dr. Catron and the other authors are all members of the staff of the department of animal husbandry at Iowa State.

* *

The cost of the pork produced starts with the selection and feeding of the sow herd—long before the pigs are weaned. And savings gained before the pigs are farrowed are fully as real as those made after farrowing.

Sows kept in a lean condition but fed rations adequate in energy, protein, vitamins and minerals generally farrow the best litters. Experiments with more than 2,000 pigs farrowed at Iowa State College have shown that corn silage, properly supplemented, makes an excellent low-cost base ration for brood sows during pre-gestation and gestation. In addition, the use of such a ration appears to improve reproductive performance.

Our farrowing results for 1955-56 indicate the potential of properly supplemented corn silage as a feed for brood sows.

We hand fed corn silage and a 20% protein corn silage balancer to 186 sows and gilts. These sows and gilts farrowed an average litter of 11.3 pigs; only 4.4% of the pigs were stillborn, and only 4 of the 186 females farrowed litters of less than 8 pigs.

In 1954 at the same farm, 231 sows and gilts self-fed a complete bulky ration farrowed an average litter of 9.4 pigs; 50 of these females farrowed small litters of 2 to 8 pigs each.

Using 1956 prices we found the calculated feed cost per pig farrowed to be 20 to 30% lower for sows hand fed the supplemented corn silage ration than for sows self-fed the bulky ration.

TABLE 1. Farrowing summary for sows and gilts fed 10-12 lb. of corn silage daily, with balancer fed evenly throughout and with balancer level varied.

	SOWS with balancer system:		GILTS with balancer system:		SOWS AND GILTS with balancer system:	
	Constant†	Low-high‡	Constant†	Low-high‡	Constant†	Low-high‡
No. of litters	29	23	30	30	59	53
Av. litter weight (lbs.)	32.6	35.9	28.4	31.6	30.50	33.75
Av. no. pigs farrowed per litter	11.42	12.83	10.15	11.69	10.79	12.24
Av. pig birth weight (lbs.)	2.86	2.80	2.80	2.71	2.83	2.76
Av. no. live pigs farrowed	10.91	12.16	9.63	11.11	10.27	11.65
Visual classification of pigs farrowed (percent)						
Strong	71.8	65.8	68.8	67.0	70.3	66.4
Medium	8.7	10.9	13.0	15.8	10.8	13.4
Weak	15.0	18.1	13.0	12.2	14.0	15.1
Dead	4.5	5.2	5.2	5.0	4.9	5.1

† 20-percent protein corn silage balancer fed evenly from breeding to farrowing.
‡ Lower balancer level was fed for first 11 weeks of gestation and was increased for the last one third of gestation.

Sows and gilts

Our farrowing results for sows and gilts fed the same ration are shown in Table 1. Sows and gilts fed the lower balancer level during the first 11 weeks of gestation and the higher level during the last one third of gestation farrowed heavier litters of heavier pigs than those fed the higher balancer level throughout gestation.

What Quality Silage?

Use only choice-quality corn silage for feeding sows. Sows don't readily eat silage made from corn in the hard dent stage. For the best sow feed, cut the corn while it's still green and, preferably, before frost.

While cattle usually will eat most of any coarsely cut silage, sows tend to sort out the unusually large pieces of stalk and brown corn husk. So, for sow feed with a minimum of waste, the finer the chop the better.

Any type of silo that will keep silage well can be used. If corn silage is used for other classes of livestock, either a temporary or permanent silo should work well. Size, however, will be more important if the silage will be used only for sows.

A sow won't readily eat more than 10 to 12 lb. of corn silage per day. If hogs are the only livestock, the use of silage for sows will be determined either by the number of sows in the herd or by the size of the silo. For a small operation with no other livestock available to make use of silage, it might be worthwhile to consider the use of a large plastic-bag type silo. With herds of 50 sows or more, however, the use of larger con-

Lilly

REPORT TO THE FEED INDUSTRY

Uses 'Stilbosol'-fortified supplements and machines to lower beef costs

Efficiency-minded Illinois feeder eliminates scoop shovel from his operation. Keeps feed and labor costs down to help increase profits.

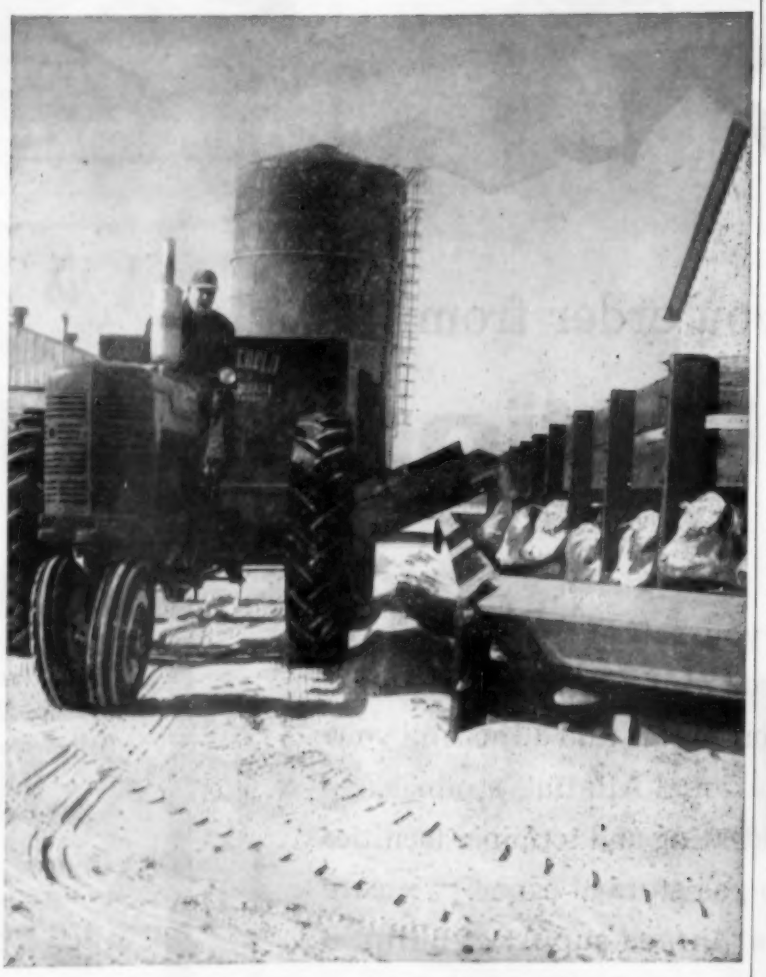
by Eugene S. Hahnel

One quick look around the feedlots tended by Wayne Smith of Naperville, Illinois, is enough to tell anyone that 20th-century thinking and planning have been at work.

Laid out for machines—Smith's feeding yards are laid out for efficient use of his mechanical feeding wagon. Beginning in the fall, he keeps his multi-purpose silos busy year 'round . . . first with high-moisture corn, followed by shelled corn, then with grass silage. The silos are equipped with mechanical unloaders and elevators. Protein supplement is added as the feed wagons are loaded automatically.

Has fed 'Stilbosol' two years—Wayne began feeding supplements with 'Stilbosol' soon after they came on the market. One group of cattle now on feed gained 1.63 lbs. per day while out on stalks. Just 17 days after being put in the feedlot, on a ration of ground ear corn, grass silage, hay, and 'Stilbosol'-fortified supplement, rate of gain had jumped to 3.23 lbs. per day.

"I'm convinced 'Stilbosol' in my supplement makes my cattle gain faster, feed quieter, and smooths out their hair coat . . . and in general do better in the same feeding period than before."



It doesn't take long to feed cattle when modern machinery and proper farmstead layout are put together. Wayne Smith's story of feeding efficiency will be read by cattle feeders in 20 national and regional farm magazines.

Bob McCrackin (left), feed manufacturer's representative, and LeRoy Barrett, feed dealer (right), compare "silage sniffing" notes with Wayne Smith (center). Says Wayne, "They know what their feed can do for my cattle, and it has proved profitable."

Lilly products for the feed industry
PROCAINE-PENICILLIN-G
CALCIUM PANTOTHENATE
VITAMIN B_{12}
'STILBOSOL'

'Stilbosol' is sold only to the feed manufacturing industry

Stilbosol
(Diethylstilbestrol Premix, Lilly)
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'Stilbosol' is Eli Lilly and Company's trademark for Diethylstilbestrol Premix which is manufactured and sold under exclusive license granted by Iowa State College Research Foundation, Inc., under its U. S. Patent No. 2751303.

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(overseas agents) Ltd.

TABLE 2. Recommended Alternative Custom-Mixed 20% Corn Silage Balancers

Ingredients	Alternative compositions 1	2	3	4
8½% Corn (ground)	702	702	802	852
16% Wheat middlings	300	300	300	400
44% Solvent soybean oilmeal	250	250	250	300
50% Meat and bone scraps	300	300	300	300
32% Condensed fish solubles	50	...	100	...
17% Dehydrated alfalfa meal	200	200	200	100
26% Distillers dried solubles	50	100	...	...
Defluorinated phosphate (30% Ca, 18% P)	20	20	20	20
Salt (iodized)	20	20	20	20
TRACE MINERAL PREMIX	8	8	8	8
3% Molasses	100	100	...	...
VITAMIN PREMIX				
Vitamin D_3, million I.U.	2.0	2.0	2.0	2.0
Riboflavin, grams	4.0	4.0	4.0	4.0
Calcium pantothenate, grams	10.0	10.0	10.0	10.0
Niacin, grams	25.0	25.0	25.0	25.0
Choline chloride, grams	60.0	60.0	60.0	60.0
Vitamin B_{12}, milligrams	20.0	20.0	20.0	20.0
TOTALS (lbs.)	2,000	2,000	2,000	2,000
CALCULATED ANALYSIS				
Protein, %	21.88	21.81	22.24	21.92
Fat, %	3.8	4.0	3.8	3.8
Fiber, %	5.6	5.7	5.7	5.0
Calcium, %	2.04	2.06	1.99	1.92
Phosphorus, %	1.17	1.19	1.17	1.29
Salt, %	1.00	1.00	1.00	1.00
Iodine, %		0.000076		
Vitamin A, I.U./lb.	7,850	7,850	7,900	4,176
Vitamin D_3, I.U./lb.	1,000	1,000	1,000	1,000
Riboflavin, milligrams/lb.	3.89	3.91	3.83	3.26
Pantothenic acid, milligrams/lb.	10.48	10.29	9.93	8.75
Niacin, milligrams/lb.	32.59	30.84	33.79	29.53
Choline, milligrams/lb.	585	585	530	517
Vitamin B_{12}, micrograms/lb.	10	10	10	10

TABLE 3. Recommended Feeding Levels for Corn Silage and Balancer

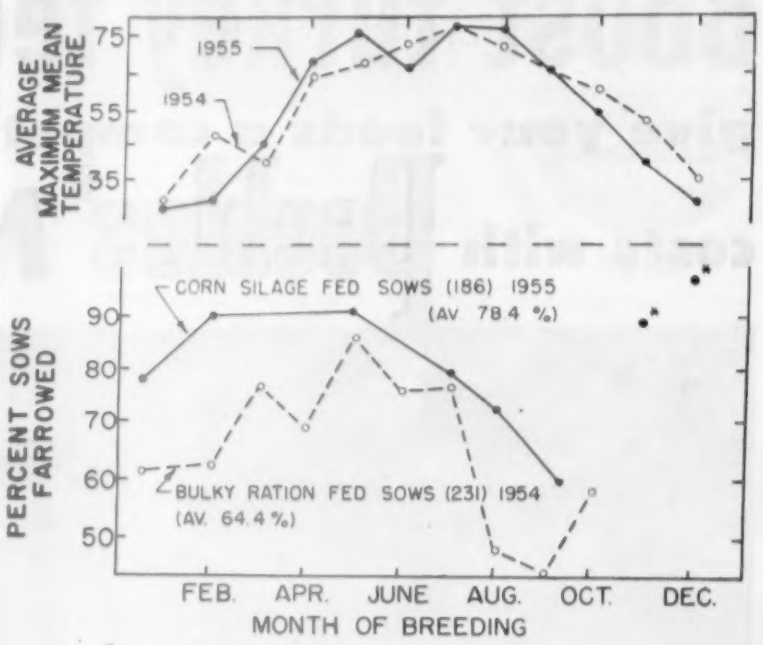
Feed once daily all of the corn silage that the sows and gilts will clean up readily. This will be about 12-12 lb. per head daily.

The 20% protein corn silage balancer should be fed once daily at the following levels:

	Flushing period	First two-thirds of gestation	Last one-third of gestation
GILTS	4 to 5 lb.	3 to 3½ lb.	4 to 5 lb.
SOWS	4 to 5 lb.	2½ to 3 lb.	4 to 5 lb.

When startinig sows or gilts on corn silliage before flushing, feed 1 pound of shelled corn on top of the corn silage for the first 3 days to increase palatability of the silage.

(FIGURE 1.) The effect of season and temperature on the percent of sows that farrowed for the years 1954 and 1955.



*Points not included in 1955 average.

ventional silos would be more economical.

You'll find that corn silage can best be fed on a concrete slab or in large troughs. For a trough, allow about 1½ ft. of trough side for each sow. Width should be around 18 to 30 in.; depth, 6 to 8 in. A high lengthwise partition in the middle of a 30-in.-wide trough or a high side on one side of an 18-in. trough will prevent sows from walking across. Crosswise partitions, though not essential, can help overcome the problems of "bossy" sows.

The ideal time to start feeding silage is about three to four weeks before breeding. This allows time for the sow to get accustomed to the change of feed before breeding time. This makes it possible to flush or full-feed the sow on a well-balanced ration two weeks before breeding. To get sows started on corn silage, we suggest "priming" the silage with about 1 lb. of shelled corn per head daily. This will encourage the sows to start eating the silage. The corn silage and the "corn silage balancer" may all be fed at one feeding. Thus, it's not necessary to feed more than once a day.

Don't start feeding corn silage right at breeding time. If you can't change the feed before breeding, wait until immediately after breeding.

Research has shown that full-feeding a sow starting about 10 days before breeding will increase the number of ova released by the sow—and that reducing the amount of feed to about two-thirds of full feed for several weeks immediately after breeding will increase the percent of ova that survive.

Our own research with the corn silage and 20% protein corn silage balancer indicates that a low level of feeding (about 70% of full feed) for the first two-thirds of gestation followed by a full feed for the last third will increase average litter size by about 1½ pigs (see table 1). This is why we advise making the change

(Continued on page 65)

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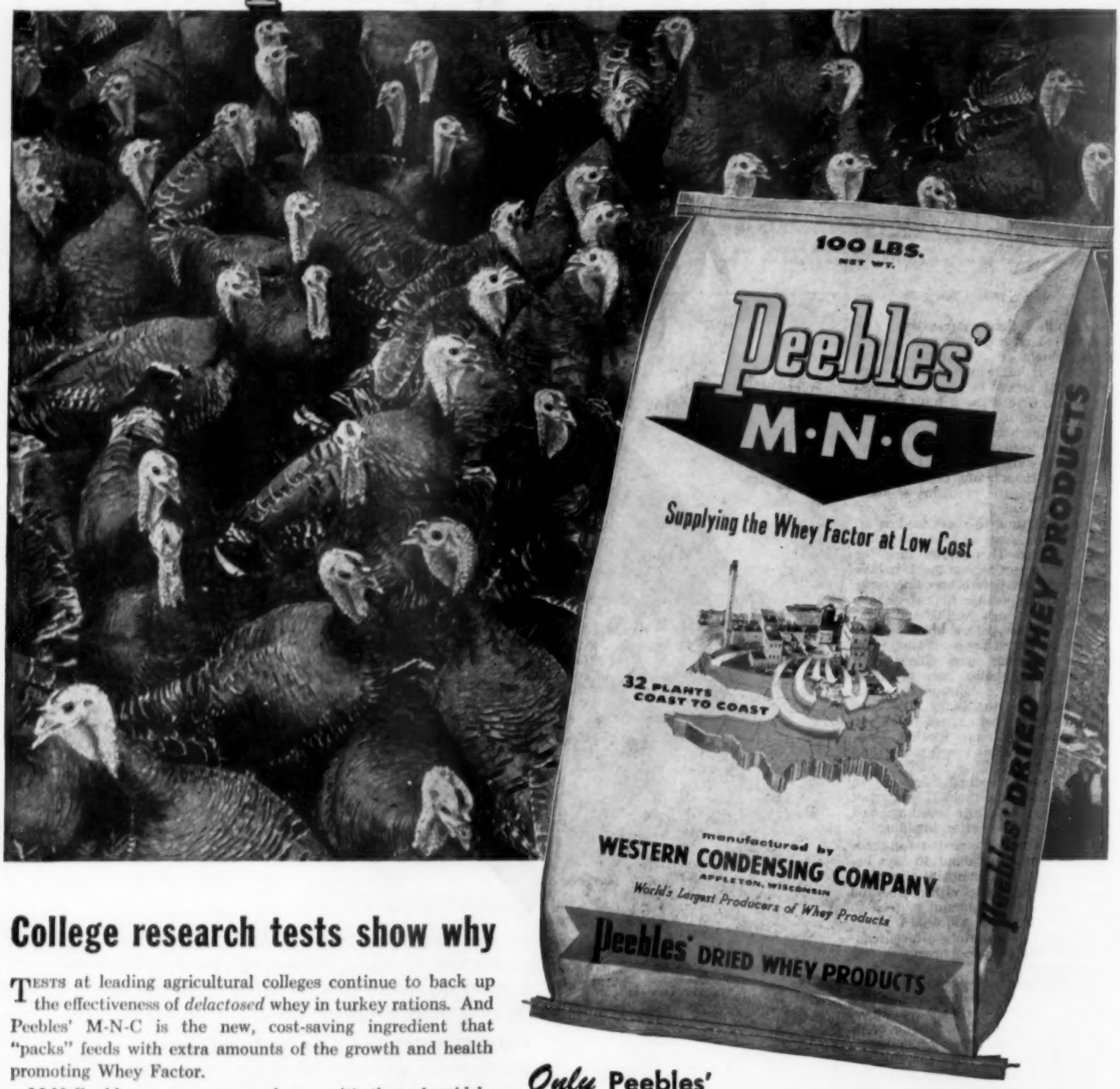
Boost turkey feed performance

give your feeds a competitive edge . . . cut mixing costs with Peebles' M·N·C (delactosed whey)



College research tests show why

Tests at leading agricultural colleges continue to back up the effectiveness of *delactosed* whey in turkey rations. And Peebles' M-N-C is the new, cost-saving ingredient that "packs" feeds with extra amounts of the growth and health promoting Whey Factor.

M-N-C adds more grow-power because it's the *only* widely used dried whey product that is delactosed . . . concentrated . . . so it contains 50% more *Whey Factor* and other important non-lactose nutrients. This means you can mix top performing turkey feeds at substantial savings . . . using only 2½% Peebles M-N-C to supply all the non-lactose nutrients of 4% regular dried whey.

Peebles' M-N-C at low levels gives extra flexibility to your formulas. Permits addition of more high energy ingredients directly related to turkeys' growth rates. You have more freedom to substitute in formulas . . . you can lower mixing costs . . . make better-selling feeds that promote more efficient conversion, healthier birds, happier customers.

Write or wire today for new folder "How To Use Peebles' M-N-C." Ask for prices from shipping point nearest you.

Only Peebles' offers *three* tailor-made whey products

PEEBLES' LACTO-G — **for general formulation**

Peebles' LACTO-G is a pure, spray-dried whey product that steps up calf, pig and poultry feed performance. It's a fine source of *Whey Factor* and lactose where only one whey product can be used.

PEEBLES' WAY-SWEET — **for high-lactose rations**

WAY-SWEET contains 80% lactose, carbohydrate of choice for young pigs and calves. Speeds growth of young animals . . . costs less than other lactose sources. WAY-SWEET is ideal for poultry conditioning feeds, too.

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Feeding Sugar to Hogs Cuts Shipping Losses In Arkansas Tests

FAYETTEVILLE, ARK.—Feeding sugar to hogs before shipment reduced shipping losses in research conducted at the Arkansas Agricultural Experiment Station. The effect of sugar feeding on quality of meat also was studied.

In the first of two trials, one load of hogs received 2 lb. of brown sugar in each 5 gal. of drinking water starting 48 hours before being shipped 250 miles to a terminal market. Another load received 3 lb. of brown sugar in each 5 gal. of drinking water. Animals in these two shipments consumed about 1 lb. of sugar per head.

Animals were weighed 48 hours before loading, when sugar feeding was started, and again at the terminal market.

Hogs receiving no sugar shrank an average of 4.2 and 7.3% in two control lots between time of loading and time of marketing. In one of the treated loads, shrinkage was only 1.2%, while in the other there was a gain of .2%.

"Feeding sugar in water caused the hogs fed sugar to drink more water than normally," M. C. Heck pointed out. "A craving for water continued for some time after the sugar was stopped. Shrink in shipping was reduced when sugar feeding was started 48 hours prior to loading and when the hogs had access to water upon arrival."

In a second trial, a study was made to determine the effect of feeding sugar on curing loss and palatability, as well as on shrinkage. Again, the sugar-fed hogs showed less shrink. Also, the yield was significantly increased as a result of sugar feeding, and there was no additional shrink in curing and smoking of hams and shoulders. Quality factors of the pork—aroma, flavor of fat and lean, texture, tenderness, juiciness—were favorably affected by feeding sugar just prior to slaughter.

Two State Officials Added in New Jersey

TRENTON, N.J.—The New Jersey Department of Agriculture has announced the appointment of two officials to its staff.

Dr. Walter M. Andress became chief of the Bureau of Poultry Disease Control, Division of Animal Industry, a new position. David L. Middleton was named agricultural economist with the Office of Milk Industry.

Dr. Andress previously was a field veterinarian with the department, a regional supervisor of USDA poultry inspection and a veterinary field man in private industry. He also worked in private practice with emphasis on poultry diseases.

Mr. Middleton, who just received his M.S. degree in agriculture from Rutgers University, formerly was an assistant county agent and earlier was a field man for a private firm.

ALFALFA MEAL PRODUCTION
May 1957 with Comparisons

Period	Suncured	—Tons— Dehydrated	Total
May 1957†	11,500	112,200	123,700
April 1957 (rev.)	11,500	20,400	31,900
May 1956	12,600	103,600	116,200
April 1956	12,300	19,500	31,800
SEASON'S TOTAL			
April-May 1957	23,000	132,600	155,600
April-May 1956	24,900	123,100	148,000

† Preliminary

Stocks of Alfalfa Meal at Producing Plants in Tons			
May 31, 1957	2,800	69,000	71,800
April 30, 1957	5,100	36,300	41,400
May 31, 1957	3,500	124,700	128,200

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STANDARD FatEnriched INGREDIENTS IN MIDDS IN HOMINY FEED

Your formulas can now include stabilized animal fats. STANDARD *Fat-Enriched* Ingredients are a scientific blend of high quality animal fats on a dry carrier with a safe, proved anti-oxidant which stabilizes fat and protects fat-soluble vitamins in the feed.

STANDARD *Fat-Enriched* Midds or STANDARD *Fat-Enriched* Hominy Feed will enable you to add stabilized animal fat in dry form to your feed. No special equipment needed.

They are economical, too, as expensive handling of liquid tallow and grease is avoided. Both packed in 100 lb. burlap bags for prompt shipment, in carlots, truck lots or split cars. Write or phone STANDARD for today's prices and samples.

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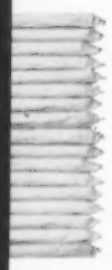
stacks solidly! easier to grip!



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3. **helps sales** because both dealers and farmers like the flexible, easy-to-handle surface and the extra-brilliant printing.

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brightest, strongest printing you've ever seen on a multi-wall bag!

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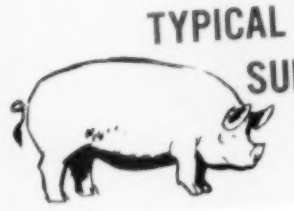
Rations shown here have been tested in both the original and modified form. They are not intended to represent the most practical or efficient rations, but rather to show the way adjustments are made. In each case the use of the Vigofac ration resulted in greater return to the feeder on the basis of improved growth or feed efficiency or *both!*

TYPICAL TURKEY STARTER

Feed Ingredient	Pounds per ton	
	Original ration	Modified ration
fish meal	200	—
whey	60	—
Vigofac	—	3
corn, ground yellow	725	702
soybean oil meal (50%)	680	920
dicalcium phosphate	20	60
non-variables		
wheat middlings	200	200
alfalfa leaf meal (17%)	60	60
iodized salt	6	6
$CaCo_3$	40	40
vitamin mix	9	9

TYPICAL BROILER RATION

Feed Ingredient	Pounds per ton	
	Original ration	Modified ration
fish meal	80	—
Vigofac	—	3
corn	1195	1112
soy b.o.m. (44%)	400	522
stab. fat	—	24
limestone	26	28
dical. phos.	20	31
vitamin B_{12} sup.	.4	1.2
non-variables	278.2	278.2



TYPICAL HOG SUPPLEMENT

Feed Ingredient	Pounds per ton	
	Original ration	Modified ration
fish meal (60%)	200	—
Vigofac	—	15
soybean oil meal (50%)	800	1380
soybean oil meal (44%)	420	—
meat and bone scraps (50%)	200	200
dehydr. alfalfa meal (17%)	80	80
steamed bone meal	160	180
ground limestone	80	80
iodized salt	35	40
trace mineral mix	10	10
vitamin premix	10	10
Terramycin® (TM-10)	5	5
brand of oxytetracycline		

At feedstuffs prices quoted in Chicago in 1957 on the dates listed and on these typical commercial rations, Vigofac savings per ton of feed were . . .

TURKEY STARTER

Feb. 11	$9.01
Feb. 18	8.68
March 11	8.28
April 1	8.47
May 17	8.30
June 14	8.05

BROILER RATION

Jan. 4	$1.68
Jan. 14	1.52
March 4	1.58
March 25	1.52
April 15	1.46
May 17	1.33
June 14	1.21

HOG SUPPLEMENT

Jan. 21	$2.96
Jan. 28	2.53
Feb. 25	3.00
March 18	2.86
May 17	2.82
June 14	2.39

VIGOFAC® CUT FORMULATING COSTS!

...saved up to $9.00 a ton!

Savings are based on the typical commercial rations given in the box to your left . . . and on feedstuffs prices in Chicago quoted in The Wall Street Journal on the dates listed. Note that in every case Vigofac saved substantial sums of money.

Savings made possible by Vigofac come from two sources: (1) A lower cost for a more potent—and more dependable—source of unidentified growth factors; (2) A lower cost for feedstuffs that replace protein, energy and other known nutrients supplied by fish meal, fish solubles, whey, distillers solubles and other conventional UGF sources.

* * *

Nutrient value is constant . . . and your feeds will equal or surpass their present performance.

* * *

The many ways Vigofac can be used on a replacement or partial replacement basis give the flexibility of formulation you need to take advantage of the most favorable price relationships between basic feedstuffs.

* * *

You can make an all-vegetable ration equal or better than one containing animal protein—using Vigofac on a replacement basis. On a partial replacement basis, you can make a ration containing only 0.5 to 2% animal protein equal to or better than one containing 5 to 7%. Or you can maintain exactly the same amount of animal protein, and save substantially on ingredient buying, by replacing all or part of conventional UGF sources with less expensive animal protein ingredients.

* * *

Growth assay tests are made on every lot of Vigofac —UGF performance is guaranteed.

Adjustments to rebalance your own formulas are easily worked out on paper, using your local delivered prices of various feedstuffs and tables showing the percentages of known nutrients supplied by ingredients affected.

The small adjustments required affect only a small percentage of your ration. Adjustments are simple, savings substantial, nutrient value constant . . . and your feeds will equal or surpass their present performance.

Your Pfizer salesman will provide technical data, worked out by Pfizer nutritionists, that will help you make quick, easy calculations. He will be glad to answer any questions you may have concerning Vigofac.

We will be happy to co-operate with you in testing Vigofac in your facilities on this economical substitution basis.

One of our customers—a feed manufacturer who recently started using Vigofac—said: "The hour I spent with my Pfizer salesman to get the details on this replacement story was one of the most profitably spent hours in my business career."

We sincerely believe it will be the most profitable hour (or less) that you've ever spent, too. Put the burden of proof on your Pfizer salesman. Call him today.

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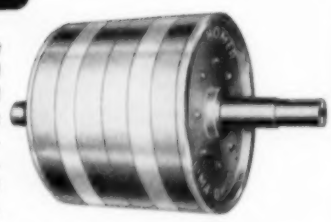
For use in processing and handling of grains, seeds, feeds and chemicals . . . to automatically and economically remove tramp iron. For use with chutes, belts and all other types of conveyors, Homer Permanent Magnetic Plates protect product quality . . . protect processing machinery . . . and prevent fires and explosions as a result of tramp iron contamination. Write today for Bulletin PL-250.

HOMER *HERCULES* AND *HERCULES SUPREME* PERMANENT MAGNETIC PULLEYS



Automatically remove tramp iron from belt conveyed materials in the handling and processing of grains, seeds, feeds and chemicals. Homer Permanent Magnetic Pulleys protect crushers, grinders, pulverizers and other process equipment. Non-electric and trouble-free—no loss of magnetic protection as result of power failures. Homer's "Radial Pole Design" assures highest magnetic strength across entire working face of pulley for deep, effective penetration and removal of damaging tramp iron. Write for Bulletin PY-260.

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For installation at discharge end of gravity, belt or screw conveying systems. Automatically remove tramp iron from feeds, seeds, grains and chemicals. Permanent and non-electric and trouble-free—Homer Magnetic Drums require no outside power source. As the burden passes over the drum, the powerful magnetic attraction of Homer's "Radial Pole Design" grabs tramp iron and holds it against the drum while the non-magnetic material falls free. The tramp iron is discharged from the drum as the drum revolves out of the magnetic field. Complete details in Bulletin MD-200. Write for it today.

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Wholesale Feedstuffs Price Index

INDEX NUMBERS OF WHOLESALE FEEDSTUFFS PRICES
BASE PERIOD 1947-49—100

Season	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Aver.
1956-57	78.9	81.8	82.6	84.6	82.5	81.4	80.7	77.6	76.1	...	...	...	...
1955-56	80.4	76.4	77.3	77.1	76.3	75.2	79.8	84.7	83.2	81.3	81.1	78.9	79.4
1954-55	89.0	90.7	90.9	91.1	90.6	88.1	85.7	81.6	80.6	80.7	78.7	80.7	85.7
1953-54	82.6	83.5	92.5	95.7	97.7	101.6	109.3	104.8	99.7	101.7	99.2	90.3	96.6
1952-53	110.1	105.5	103.2	100.7	97.1	95.9	91.9	92.4	88.1	88.0	86.5	84.3	95.3
1951-52	108.9	112.1	114.1	115.2	114.3	113.2	115.2	114.6	113.9	112.5	120.7	116.3	114.2
1950-51	87.3	93.8	97.3	99.8	103.3	102.4	102.5	101.3	99.9	101.6	99.8	104.0	99.4
1949-50	86.8	85.8	87.2	84.2	82.7	86.7	90.4	96.8	93.2	103.1	94.4	89.0	90.0
1948-49	86.8	95.4	94.7	92.2	86.1	87.2	92.2	89.9	87.9	93.5	97.7	89.5	91.1
1947-48	117.3	117.3	125.0	135.7	117.2	113.5	114.3	112.6	114.8	107.6	91.7	92.2	113.3
1946-47	94.9	104.8	91.8	86.8	82.6	98.2	93.8	92.9	99.0	106.4	109.2	119.0	98.3

INDEX NUMBERS OF FEED GRAIN PRICES (CORN, OATS, BARLEY AND GRAIN SORGHUMS) 1947-49—100

Season	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Aver.
1956-57	75.8	77.0	76.6	76.8	73.6	73.8	73.5	74.3	72.8	...	...	...	...
1955-56	69.3	69.3	73.0	72.0	73.8	75.4	82.9	84.5	84.3	86.4	86.6	83.9	78.5
1954-55	87.7	85.1	85.0	84.3	82.6	80.5	81.9	84.2	83.0	81.6	75.4	72.8	82.0
1953-54	87.2	87.6	86.5	86.1	85.2	86.6	87.0	88.7	89.2	88.2	89.1	89.4	86.7
1952-53	92.9	90.5	92.8	90.3	87.3	88.2	87.4	89.1	86.7	88.1	88.9	89.2	89.3
1951-52	98.5	103.9	108.7	107.7	101.8	102.0	101.3	101.7	101.1	100.1	101.1	98.8	102.3
1950-51	82.5	86.5	92.0	95.8	99.5	97.2	98.0	97.5	94.1	95.7	96.4	97.5	94.4
1949-50	68.9	69.0	72.9	73.5	73.3	75.4	80.3	83.7	83.8	86.3	83.9	84.1	77.9
1948-49	82.5	79.4	81.2	80.7	73.8	78.7	78.0	74.8	75.1	76.9	71.5	72.3	77.1
1947-48	131.7	136.0	145.2	150.3	124.6	130.0	129.8	127.9	127.7	114.4	103.0	96.4	126.4
1946-47	99.6	82.8	77.9	76.9	80.3	96.8	99.4	99.6	114.5	115.4	128.2	136.2	100.6

Compiled by Market News Branch, Grain Division, Agricultural Marketing Service, U.S. Department of Agriculture.

State Chemist Reports Feed Sample Testing

TALLAHASSEE, FLA.—In his 1956 annual report of feed samples analyzed, the Florida Department of Agriculture chemist, J. J. Taylor, reports 2,498 official samples tested and 149 special samples checked.

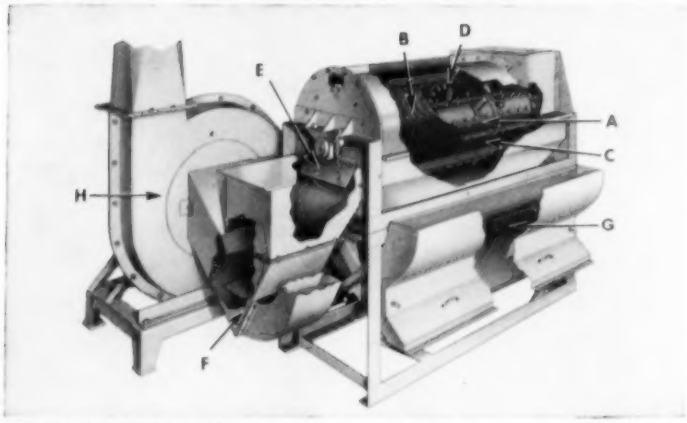
All official samples of formula feed and most ingredients were analyzed for moisture, protein, fat, fiber, ash and nitrogen-free extract. When significant guarantees were made for certain minerals, analyses were also made for these.

Of 2,451 samples checked for fat content, 70 were found to be outside the required tolerance. Twenty-eight samples of 2,452 tested for fiber content were outside tolerance; 62 of the 2,503 samples checked for protein content were outside tolerance. Seventeen of 171 samples checked were found to have improper amounts of calcium. Of 18 samples tested for arsanilic acid, 7 were outside tolerance, according to the report.

ALFALFA MEAL BURNS

TOLEDO, OHIO — An estimated $1,000 worth of dried alfalfa meal was ruined in a fire recently at the Toledo Alfalfa Mills. It is reported that sparks in the drying equipment started the fire.

EVERY FUNCTION CAREFULLY ENGINEERED to provide the most compact, dependable and efficient corn shelling ever available



TRIUMPH No. 1200* Corn Shellers
with shelled corn cleaning attachment and cob blower

Designed Expressly for Grain and Terminal Elevators

The unique principles developed by TRIUMPH Engineers for the TRIUMPH No. 1200 Corn Sheller have produced superior performance and high shelling rates in the high moisture corn areas of the East, and the Southern Snapped Corn Areas of the South as well as the machined picked corn areas of the Corn Belt. That these principles have produced outstanding results is demonstrated by the wide acceptance and popularity of the TRIUMPH No. 1200 Corn Shelling System by commercial corn handling plants in the very areas where corn shelling problems were the most troublesome in the past.

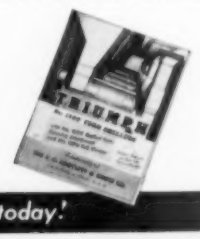
Along with the development of better corn shellers, TRIUMPH Engineers and Distributors have helped solve many problems relating to handling and shelling ear corn from the dump pit to the cob bin.

The valuable experience of TRIUMPH in this specialized field is a plus value gained only in buying TRIUMPH.

Check these new patented principles of sheller design developed by TRIUMPH Engineers:

A—Rugged Shelling Cylinder—improved design—carefully engineered for maximum agitation assuring thorough shelling and separation. B—Every inch of area around the shelling cylinder is actively used to screen out shelled corn. C—Area between shelling cylinder and screen enlarged to provide high shelling rates and allow foreign material to pass. D—Curved Comb Bars control rate of flow internally to assure full separation. E—Automatic control of discharge rate. F—Pneumatic trap for foreign material. G—"Push-Pull" cleaning thoroughly controls aspiration of shelled corn. H—Separately powered, high capacity cob blower with flexible positioning engineered into the shelling system.

*Pat No. 2,754,827 Other Pats. Pending



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THE C. O. BARTLETT & SNOW CO.
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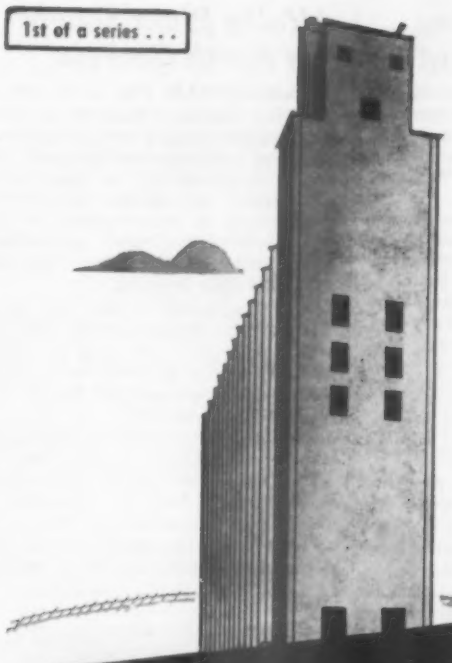

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Oklahoma Studies "Two-Way" Calves

STILLWATER, OKLA.—The possibility of producing "two-way" calves, calves with enough quality and finish to either sell to the feeder or packer, has been evaluated for the third time by Oklahoma Experiment Station animal husbandmen.

The system necessitates fall-calving and creep feeding in order to obtain desirable weight and finish for May or June markets that are usually highest for fat calves. However, the additional cost of maintaining the beef cow for this production—since cows nursing calves require more feed—has appeared to be a serious drawback.

The three treatments tested were year-long grazing on native grass with winter supplementation, year-long grazing with silage plus supplement during the winter, and native grass during the summer with rye-vetch pasture for winter grazing.

The low cost rye-vetch winter pasture system proved the most profitable although the calves weighed slightly less and were not as well finished, Dr. L. S. Pope, animal husbandman, reported. The calves produced from each system, good enough to go to either the packer or feeder, yielded from 56 to 57% and graded good to choice.

The addition of 5 mg. of stilbestrol to the creep feed of the calves during the last 47 days before marketing increased profits slightly. More recent tests in which the hormone was added for 140 days before marketing resulted in a 23 lb. weight increase with no significant difference in grade.

Oats Slow Hog Gains In Illinois Study

URBANA, ILL.—Oats in hog rations slowed gains in a recent experiment at the University of Illinois.

Oats were added to the ration of 100-lb. hogs until they reached market weight, replacing one third, two thirds or all of the corn in the ration, according to G. R. Carlisle, livestock specialist.

In all cases, the oats slowed down gains and increased the amount of feed needed to produce 100 lb. of gain. If the oats cost as much as corn per pound, they also increased the cost of gain, Mr. Carlisle pointed out. Lower levels of oats affected gains more when the hogs were on pasture than when they were in drylot.

Daily gains ranged downward from 1.77 lb. for the drylot pigs with no oats in their ration to 1.75 lb. with one third oats, 1.59 lb. with two thirds oats and 1.35 lb. with all oats instead of corn.

For the pasture pigs, comparable gains were 1.70 lb. with no oats, 1.39 lb. with one third oats, 1.43 lb. with two thirds oats and 1.38 lb. with all oats.

Costs per pound of gain ranged upward from 9.4¢ for the drylot pigs with no oats to 11.7¢ for the pigs getting all oats. On pasture, costs of gain ranged upward from 8.8¢ for the pigs getting no oats to 10.6¢ for the pigs getting all oats.

REJECT MILL PLAN

CLARISSA, MINN.—Patrons and stockholders of the Clarissa Cooperative Creamery turned down a plan to have the creamery enter the feed grinding business. After a discussion of the plan at a recent meeting by representatives of Midland Cooperatives and Central Cooperative Wholesale, patrons decided to turn down a proposal to invest the $15,000 required for equipment. The community has been without a feed mill for a number of months.

International Milling Improves Feed Plant

MINNEAPOLIS—A program involving some $75,000 in improvements has been announced by International Milling Co. for the firm's Supersweet Feeds plant at Willmar, Minn.

Improvements include a new truck scale and modification of plant facilities to improve feed production and insure quality control. Installations include seven large steel bins, rearrangement of mill machinery and construction of a number of legs and conveyors.

Work is expected to be completed about Aug. 15.

MORE EFFICIENT

The U.S. Department of Agriculture says that if farmers were no more efficient than they were in 1940, consumers would have to spend another $8@10 a year for food.

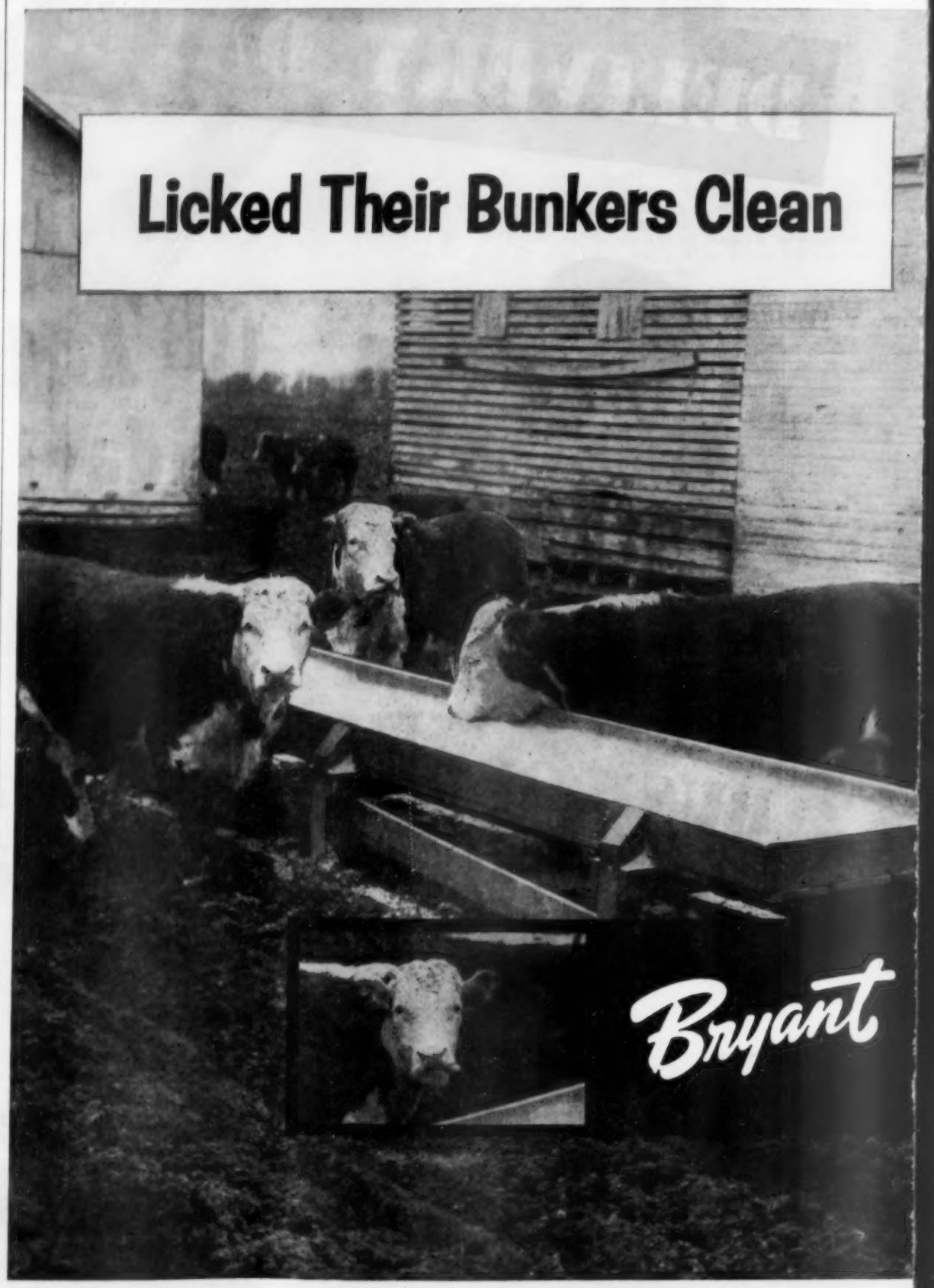
Alfalfa Plant Sought For North Georgia

GAINESVILLE, GA.—Members of the Hall County Chamber of Commerce were to meet with a representative of a midwestern feedstuff processor to determine the possibilities of locating an alfalfa dehydrating plant here, S. Kinningham, of the chamber's agricultural committee, announced following a meeting with north Georgia farmers.

Mr. Kinningham stated that local feed mills, manufacturing chicken feed, use about 12,000 tons of alfalfa a year, worth approximately $600,000, much of which could be diverted to local farm income.

He stated that Kenneth Morrison, Consolidated Blenders, Inc., was to be in Gainesville July 15 to study the possibilities of locating a plant in the Georgia broiler area.

L. C. Rew, Hall County Agent, said that alfalfa production in the county



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Oil soluble vitamin protector and pigmentation aid.

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Stable dry Vitamin A products.

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BoDEE (Mineral) STABLE VITAMINS D
Vitamin D that will not decompose when combined with minerals.

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For better poultry pigmentation.

HYDROPOID
Dry, free-flowing partially hydrogenated animal fat.

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Effective dog food deodorant.

Bowman Feed Products, Inc.
130 Central Ave., HOLLAND, MICH.

ranks among the lowest in the state, with about 50 acres planted. He added that a minimum of 2,500 acres would be required to operate a dehydrating plant in the area.

The chamber is planning a campaign to promote alfalfa growing in the county in conjunction with efforts to locate the plant here.

Attending the meeting were P. J. Bergaux, extension agronomist, and H. E. Chastain, district agent with the Georgia extension service.

Safeway Stores Sells Idaho Packing Plant

NAMPA, IDAHO—With the recent sale of its Zenith Meat Co. plant here, Safeway Stores disposed of the last of its livestock slaughter operations to Armour & Co.

Safeway purchased the Nampa plant two years ago from King Packing Co., a pioneer Nampa firm, to augment regional supplies for Safeway retail operations in Idaho and nearby states. D. M. Phipps, manager of Safeway's meat supply division, said that during World War II, when faced with severe meat procurement problems, Safeway found it necessary to operate several slaughter plants and feed lots in certain sections of the country.

"By 1948 we had disposed of all our wartime feed lots, and afterward we have maintained only three slaughter plants. Two were sold in 1956, and now, with the Nampa plant's sale, we have concluded our plan to be completely out of the cattle feeding and slaughtering business," he said.

Returns from Panama

FAYETTEVILLE, ARK.—Dr. Paul R. Noland, a member of the Arkansas agricultural mission to Panama for the past two years, returned to the university July 1 as associate professor of animal industry and veterinary science.

Value of Manganese In Sow Ration Noted

GAINESVILLE, FLA.—The value of adequate manganese in sow rations has been demonstrated in research by J. C. Outler, Jr., of the Florida Agricultural Experiment Station.

Pigs farrowed by sows receiving low levels of this element weighed as much as 30% less at birth and were generally weaker.

Mr. Outler tested two levels of manganese—3 parts per million and 10 ppm—on growth, reproduction and lactation. Growth was much slower at the lower level, but at maturity both groups of hogs were about the same size and weight.

Age at which boars and gilts reached puberty was not affected by the level of manganese. The boars were bred to test gilts and all were fertile. All gilts conceived at first service during the second heat period, and all of them farrowed normal, healthy pigs.

Milk production of the sows apparently is not as good in the manganese-starved animals because a weekly comparison of weights showed the high-manganese pigs to be heavier all through the lactation period.

Warren R. Anderson

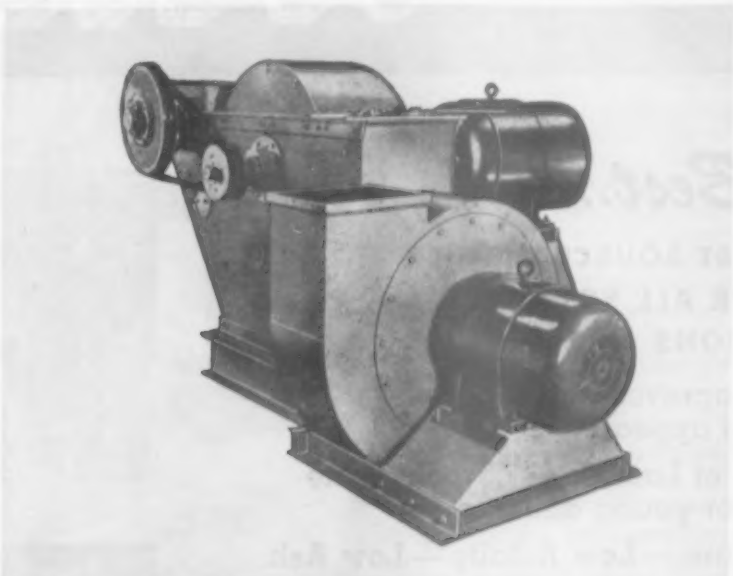
NEW OWNER — Warren R. Anderson is the new owner of the Mason City (Iowa) Feed & Supply Co. The former owner, Jack Franta, will continue to operate another feed firm which he owns at Gilbertville, Iowa. Mr. Anderson was with Northrup King & Co. for the past 11 years, the last three being in the hybrid corn sales promotion and sales training department. He is a graduate of the University of Minnesota college of agriculture. The Mason City company handles General Mills' feeds, along with farm supplies and equipment.

Sen. Talmadge Slated To Speak at Egg Event

ATLANTA — Sen. Herman Talmadge (D., Ga.), member of the Senate Agricultural Committee, will be the chief speaker at the annual meeting of the Georgia Egg Assn., C. E. Boggs, president, has announced.

The meeting will be held Aug. 21, during the second annual Georgia Poultry Institute at the 4-H center near Eatonton.

Other items on the program include the report of the membership committee, since the egg association is the largest affiliated with the Georgia Poultry Federation, and election of officers.



The Bryant Double-Duty is perfectly balanced and gives a clean uniform grind. The exclusive "Straight-Through Air Flow" action gives you full capacity always. never any choking or plugging.

"Our Steers Licked the Bunkers Clean First Time We Ground Feed on a BRYANT HAMMERMILL"

writes Lexie Kennedy, Newton, Ill. Feed Mill operator and Stock farmer

Lexie Kennedy knows from personal experience that farmers get the kind of grind that stock thrives on from a Bryant Hammermill.

A stock raiser himself, Lexie Kennedy also owns a Bryant Hammermill and writes of his results as follows:

"We've been feeding steers for 5 years. Started feeding 65 head last September. They ran about 675 pounds on the average and now (March, 1957) weigh about 1100 pounds each. They're gaining about 3 pounds a day and should go around 1300 pounds apiece when we market them in the next 60 days.

"We're feeding ground corn mixed with a supplement. We grind corn, cob and all right through our Bryant with a crusher-feeder attached.

"We've noticed the Bryant Hammermill gives us a good, uniform granular grind with no fine flour or dust. Cattle don't enjoy coughing from dust in the feed, but they licked the bunkers clean first time we ground feed in our Bryant.

"As for the Bryant Hammermill itself, we like it fine. Never chokes up or plugs. It's quiet in operation and changing screens is simple and quick.

"The straight-through air flow design and 1800 RPM fan running on its own motor is the most practical all around arrangement we've seen yet.

"Like a good many Bryant Hammermill operators we believe our service to our customers should include information about market conditions and the latest feeding techniques. We do our best to supply these and other extras that don't appear on the bill."

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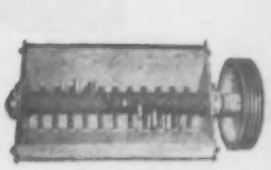

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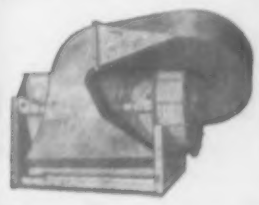

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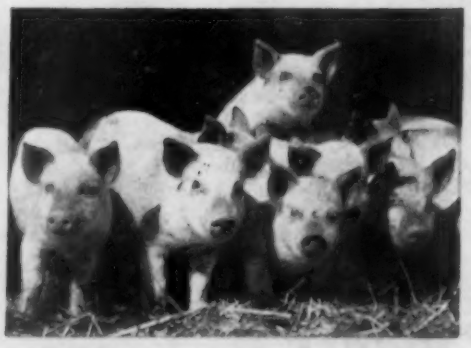

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L. G. Neel

RETIRES—L. G. Neel, industry representative for Hales & Hunter Co., Chicago, is retiring after 28 years of service with the firm and to the poultry industry. Mr. Neel joined Hales & Hunter Co. as advertising and sales promotion manager in 1929. In 1930, he created the poultry feeds department and was serving as the head of this department when he became assistant to the general operating manager in July, 1954. Mr. Neel will make his home in Missouri, but will continue to serve Hales & Hunter Co. as director and consultant.

Veterinarian Joins Delaware Laboratory

MILLSBORO, DEL.—Dr. Boyd Stock, a veterinarian, has joined the staff of Delaware Poultry Laboratories at its biological plant at Millsboro, Del.

Dr. Stock will work with Dr. Albert S. Cosgrove and Dr. Hiram N. Lasher, director of laboratory activities. The team will have charge of the control testing of the vaccines being manufactured by the production division.

Dr. Stock holds a D.V.M. degree from Colorado State University and a B.S. degree from Utah State Agricultural College.

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When you go on a Nopcosol® program you let us blend your supplementary ingredients; you let us worry about buying and storing and blending microscopic quantities of delicate vitamins, antibiotics, and trace minerals. Yes, we said *minerals*. Nopcosols contain optimum quantities of necessary trace minerals and in spite of that are *guaranteed* as to vitamin potency.

Many packaged supplements do not contain trace minerals. Why? Because their manufacturers fear the effect minerals may have on the stability of their vitamins A and D. But the vitamins A and D in Nopcosols are Micratized,® protected by a patented process that assures their stability under the most adverse conditions—even in the presence of trace minerals. This assurance of stability enables Nopco to provide a complete, top-quality supplement with *guaranteed* vitamin potency.

Talk to your Nopco representative about simplifying your mixing problems or write us direct.

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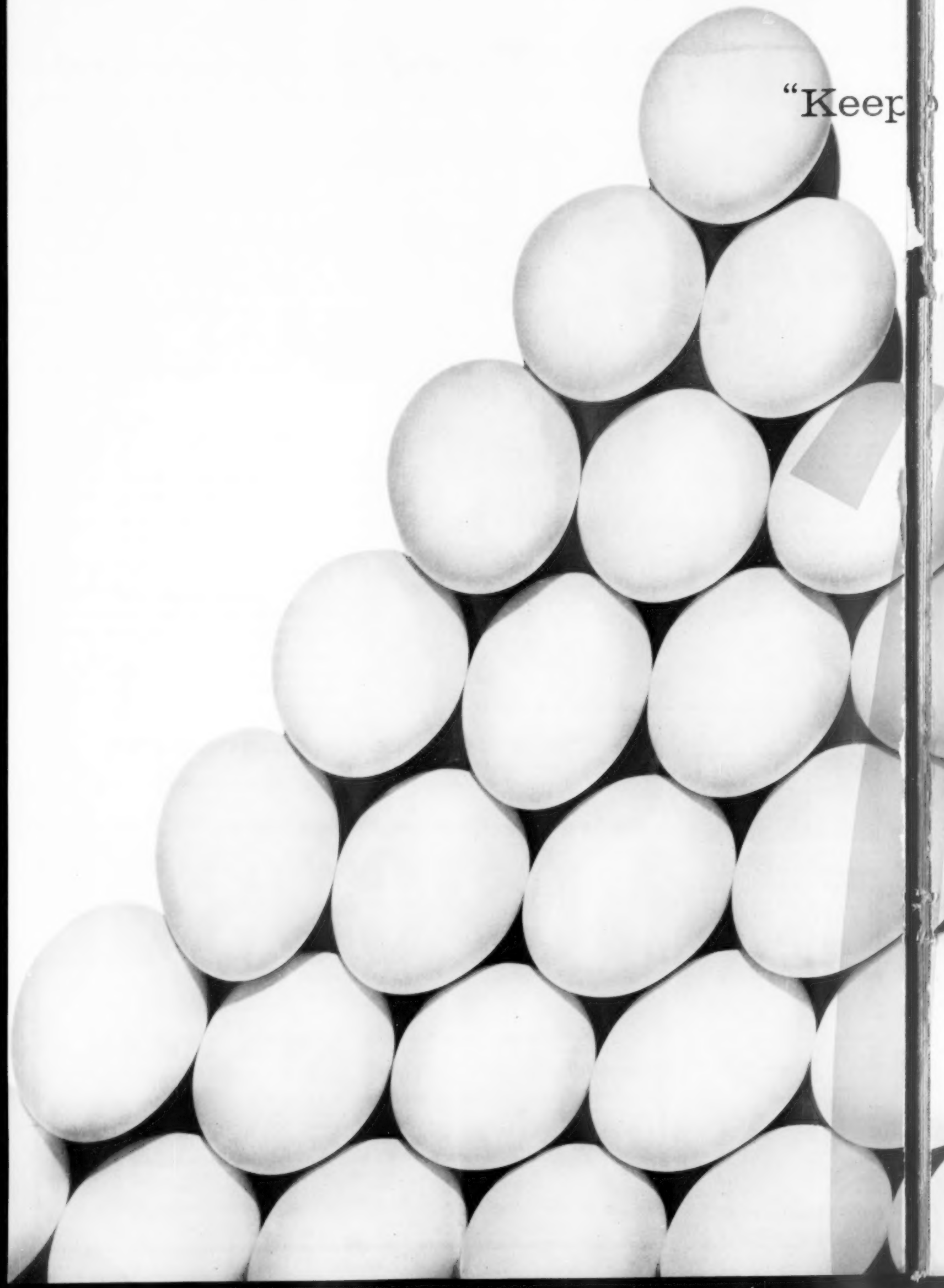
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Feed Tonnage Sales Higher in Arkansas

LITTLE ROCK, ARK.—Feed sales reported by the Arkansas state plant board for the third quarter of this fiscal year are 257,561 tons, compared with 227,383 tons for the same period last year.

Sales for the first three quarters this year total 776,371 tons, compared with 682,674 tons for a similar period during the 1955-56 fiscal year.

For the current third quarter, broiler (starter and grower) feeds led in sales with 100,500 tons reported. All other poultry feeds accounted for 32,700 tons and dairy feeds sold totaled 32,800 tons. A total of 25,000 tons of cottonseed meal was reported for the third quarter.

Praises Pasture Job In South Carolina

SPARTANBURG, S.C.—"The best job of building pastures in the country is being done right here in South Carolina," Dr. L. G. Allbaugh, director of agricultural relations for the Tennessee Valley Authority, declared at a recent grassland field meeting in Spartanburg County.

"We have gone far with grass since a few years ago," W. J. Martin, county agent said, "when we knew it only as a pest in the cotton patch. From experiment, we are learning to manage it."

He added the soil-saving potentials of grass are as great as the need for it for livestock production.

Charles Holcombe Heads North Central Control Officials

SIOUX CITY, IOWA—Charles Holcombe, director of the Minnesota agriculture products inspection department, was named president of the North Central States Association of Dairy, Food, Drug, Feed, Fertilizer & Pesticide Officials at its recent 1957 convention here.

He succeeds I. Levin, Iowa state chemist, retiring president.

Other officers are Howard Hammond, chemist, North Dakota state laboratories department, vice president and Bennett Hites, chemist, North Dakota state laboratories department, secretary.

Officials attending the meeting represented the U.S. Food & Drug Administration and the states of Minnesota, Iowa, North and South Dakota and Nebraska. Also attending were Clyde D. Lacey, director of the dairy division, Oklahoma department of agriculture, and R. N. Gray, Missouri department of agriculture feed control official. Representatives of food, feed, dairy, drug and chemical firms were also registered.

At the meeting, talks were given on medicated feeds, uniformity of various state laws, sampling and analytical techniques by I. Levin; R. E. Bergman, director of feed and fertilizer control for the Minnesota department of agriculture, and Bennett Hites.

The group also heard talks by Clyde Spry, secretary of the Iowa department of agriculture, and Maurice P. Kerr, chief of the Minneapolis district of the Food & Drug Adminstration. Mr. Kerr discussed chemical additives in foods and described the intraining program for inspectors and chemists of the Food & Drug Administration.

Speakers from industry included Sanford Hill, DuPont Co., who developed trends of economy, automation and other adjustments as a result of self review in industry. Also heard were Earl Mason, Iowa Creamery and Butter Manufacturers Assn., and Don Quist, Iowa Creameries Assn.

CONVENTION SPEAKERS, OFFICERS—New officers for the North Central States Assn. of Dairy, Drug, Food, Feed, Fertilizer and Pesticide Officials elected at the recent annual meeting and the speakers for the meeting are pictured here. Officers shown, left to right, are Howard Hammond, North Dakota, vice president; I. Levin, Iowa, retiring president, and Charles Holcombe, Minnesota, president. Speakers, left to right, are Clyde Spry, secretary of the Iowa department of agriculture; Maurice P. Kerr, U.S. Food & Drug Administration, and Waldo C. Johnson, Minnesota department of agriculture.

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In specialty feeds for dogs, cats, mink, fish and bees the incorporation of Brewer's Dried Yeast avoids the risk of nutritional deficiencies, promotes proper metabolism, adds appetite appeal and protects against certain types of infections.

The natural anti-oxidant properties of Brewer's Dried Yeast guard the purity, freshness and palatability of flavor-and-oxidation-sensitive feeds and prevent or retard the development of harmful rancidity and thus prolong storage stability. They also protect oxidation-prone vitamins.

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DeKalb (Ill.) Molasses Feed Co. Growth Credited to Fundamental Principles

The founder of a 10-year-old feed manufacturing firm says adherence to fundamental business principles and a determination to please customers have been guiding theories in the expansion of his business. This feed man is H. H. Cortelyou, founder and owner of the DeKalb (Ill.) Molasses Feed Co., and a veteran of 29 years in the feed manufacturing industry.

Mr. Cortelyou says the company was originated with an idea of producing waste-free, high-sugared feed for cattle to hasten their fattening process.

Says Mr. Cortelyou: "Molasses containing 51% sugar, and this sugar increases the animal's appetite, induces him to drink more water, and gets nutrition into his blood stream more rapidly."

Certain other ingredients are included in the feed, such as proteins, starches, vitamins, diethylstilbestrol and other products.

The DeKalb Molasses Feed Co. began manufacturing feed in a railroad freight house, and today three one-story ingredient warehouses have been added to the original building.

"In the beginning I sold feed by day, and made it by night," Mr. Cortelyou remarks. When the business began to prosper, he was able to hire assistance, and now nearly 50 employees are on the payroll.

50,000 Gal. Storage

Molasses arrives at the DeKalb plant by tank truck and by rail, and is unloaded into a 50,000-gal. storage tank. Nearly all the processing equipment is located in a 40-ft. area in the original building, and extends up to the second floor. One of the smaller buildings is used for storage of multiwall bags and premium ingredients, while the other two are used for the storage of bagged ingredients.

The feed, in 50-lb. bags, is shipped from the plant by truck, and is distributed in Iowa, Indiana, Wisconsin and Illinois.

Mr. Cortelyou originally set up the DeKalb facilities with the hope of placing other plants in strategic positions. Another plant is now operating in Rock Falls, Ill., under the management of R. M. Robinson.

"By spreading our business out," Mr. Cortelyou states, "we are able to more readily serve our customers." He employs eight salesmen, who are under the supervision of Tel King, and advertises chiefly by direct mail and through the various newspapers.

Thee Lines

In the DeKalb plant there are three separate lines producing meal molasses feed, molasses pellets, and hard pellets for cattle and hogs. An automatic gas-fired steam boiler is used for the heating of molasses and for operating the pelleting machines.

Bagged ingredients are taken from the warehouses to the manufacturing building, emptied into an elevator, sent up to the second floor, then discharged into a two-ton horizontal mixer. The dry feed is then put into one of the four holding bins, discharged into a meal molasses feed mixer, soft molasses pellet mill, or the hard pellet machine.

Next the pelleted feed is passed over shakers and through a horizontal pellet cooler. A conveyor transfers the pellets from the cooler to a hopper above automatic bagging scales. Molasses meal is taken directly from the mixer to a bagging scale.

The finished feed is discharged by chute into waiting trucks, or stored for later shipment. Because of the adaptability of the plant, it is not

T. R. Edgerton

JOINS BRANSON—T. R. Edgerton has joined the Earl Branson Co., Kansas City brokerage firm which was formed June 1. Mr. Edgerton will specialize in the vitamin, mineral and micro-nutrient phase of the operation.

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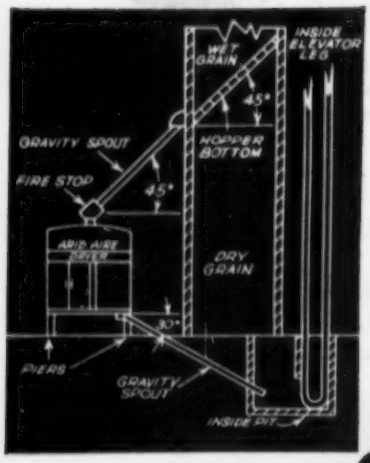

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Unlike many dryers, an Arid-Aire is self-operating. *Simply turn it on and walk away from it!* No loading, unloading, or operating attendance required. With an Arid-Aire there is no clogging—the machine cleans itself automatically. Heavy insulation prevents loss of heat and conserves fuel. *Bushel for bushel, Arid-Aire has greater capacity at less cost than any other dryer.*

500 BUSHELS PER HR. CAPACITY An Arid-Aire Model 4 Dryer provides *even drying* of up to 600 bushels an hour for wheat, barley, oats, rye, milo maize and other small grains—up to 400 bushels an hour for shelled corn, soybeans, and rice.

PAYS FOR ITSELF! Depending on amount of grain handled, some owners *pay for their Arid-Aire in a single drying season.* Superior engineering provides high capacity—keeps operating costs LOW! Fuel and electrical costs average one cent per bushel for shelled corn, soybeans, milo and rice—approximately half that amount for smaller grains. When other cost factors are added such as depreciation, maintenance and manpower, maximum costs will not exceed *the lowest cost of any other dryer.*

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SALES—H. H. Cortelyou, head of the DeKalb (Ill.) Molasses Feed Co., is shown at the left discussing a sales problem with one of the firm's salesmen, Ross Jensen. At the right are Tel King, sales manager, discussing a bookkeeping detail with Irene Capehart of the company's accounting department.

ALARMING STRAIN

AMHERST, MASS.—Dr. J. Robert Smythe, poultry husbandman at the University of Massachusetts, reported in the university publication, Feathered Fax, recently that not all genetic selection in poultry has been for high egg production or speedy growth.

He said early-rising Japanese farmers have depended on roosters to awaken them for thousands of years and have been making sure of an early awakening by developing strains of louder and longer-crowing roosters. Some of these highly developed "leather lungers" can give forth with crows lasting 15-20 seconds, he reports.

Their only trouble, Dr. Smythe reports, is that they can't be turned off on Sunday. On that basis he ventured the guess that they would "create quite a sensation" in suburban Massachusetts.

necessary to store large quantities of finished feed. This enables the customer to purchase fresh feed at all times, Mr. Cortelyou points out.

Mr. Cortelyou bases his business on the "good merchandise and satisfied customer" theory. Definite plans to increase the facilities of the DeKalb plant are being processed, as the volume of business grows.

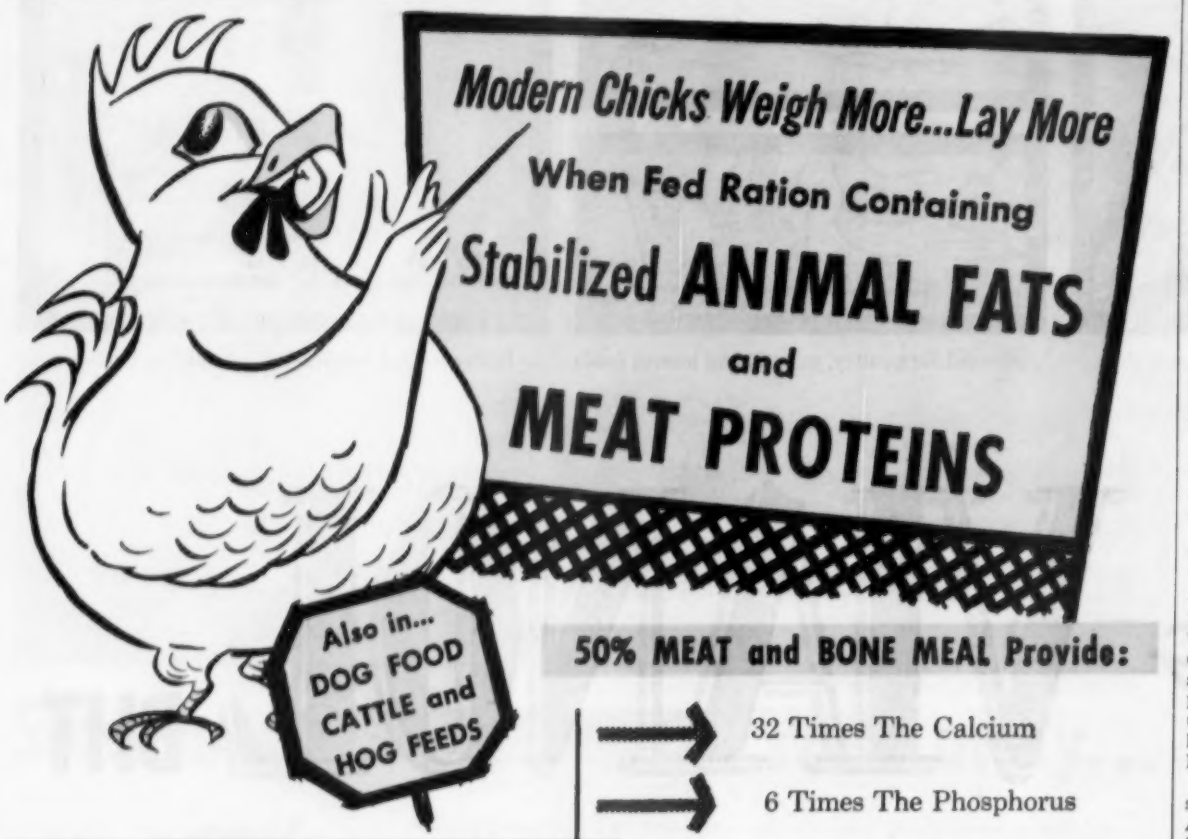
"Quality control is important in the production of a high quality feed," says Mr. Cortelyou. "Samples are sent to testing laboratories so that the quality of each ingredient is guaranteed. No ingredient is used until it has been satisfactorily tested."

All-Pelleted Ration For Lambs Studied

PULLMAN, WASH. — Washington State College scientists reported on current sheep studies at the college's annual Sheep Day.

Dr. M. W. Galgan said that a study with 144 feeder lambs showed that lambs can be fattened by using an all-pelleted ration and by self-feeding. Use of Aureomycin and stilbestrol appeared to improve gains. Levels of roughage up to 65% produced satisfactory carcasses. The cost of pelleting, with the current small volume of production, however, is too high to be economical in fattening lambs, Dr. Galgan said.

Roy L. Smith said a creep-feeding study with 175 lambs indicated that Aureomycin in the creep ration will increase weight gains and give the lambs a thriftier, more vigorous appearance. He said more work is needed to determine whether the antibiotic will control scours in lambs. That, he said, is because neither lambs given Aureomycin nor the controls developed scours in this study.



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CORN SILAGE FOR SOWS

(Continued from page 47)

to corn silage at least three to four weeks before or immediately after breeding.

The concentrate ration used with corn silage should be a 20% protein "corn silage balancer" to supply nutritional needs not supplied by the silage. We built our own balancer for our experiments.

Four suggested corn silage balancers are listed in Table 2.

The balancer can be approximated by adding about an equal amount of ground shelled corn to a high-protein (30-35%) brood sow supplement. However, the recommended balancers more precisely meet the nutritional needs not supplied by the corn silage.

To take advantage of the recent findings of research, we suggest that the 20% protein corn silage balancer be fed as outlined in Table 3. Where necessary, the amount of balancer fed can be adjusted up or down slightly to compensate for the amount of corn in the silage and the general condition of the sow.

Along this same line, the sows should be kept lean and not allowed to become fat before breeding or during the first two-thirds of gestation. Three-fourths of the fetal development takes place during the last third of the gestation period. This is the time to increase the level of balancer fed as shown in Table 3 to provide ample nutrients for the rapid fetal growth during this period. A total gain during the 16 weeks of gestation of 50-70 lb. for sows and 80-100 lb. for gilts is adequate.

Limitations?

We mentioned earlier that a sow won't readily eat more than 10 to 12 lb. of corn silage per day. If no other livestock are fed, this tends to limit feeding sows corn silage to producers with a sow herd of 50 or more sows. Otherwise, construction and use of a "sow herd size" silo is about the only feasible method; this would represent an added expense and also is in face of the fact that greater relative savings from the practice come as the sow herd becomes larger.

The producer **already using corn silage for other livestock** will find that it pays to use silage for sows also. In this case, there'd be no expense of providing additional ensiling facilities to offset the savings possible by feeding corn silage to relatively small herds.

Multiple-Farrowing

Corn silage works well for large herds where a multiple-farrowing practice is followed. However, there is an additional problem. The heat of the summer seems to reduce the ability of the sow to get-with-pig (Figure 1). We can't say whether this is the result of the sow or the boar. But, in planning late fall and early winter farrowings, additional sows have to be bred to compensate for the drop in the percentage of sows that will farrow—if you wish to farrow enough litters to keep equipment filled to capacity. Though the sows in 1955 fed corn silage had a higher conception rate than the 1954 sows, factors other than corn silage also may have contributed to the difference in the two years.

Quick Guide

- Start feeding corn silage at least three to four weeks before or immediately after breeding.
- Use only high-quality silage cut short and ensiled while the plant is green.
- For best results, use one of the ration formulas outlined in Table 2.
- Feed corn silage as outlined in Table 3. With the start of rapid fetal growth—about the 11th week of gestation—the level of proteins, vitamins, minerals and energy must be increased by increasing the amount of corn silage balancer as indicated.
- Failure to increase the level of corn silage balancer during the last four or five weeks of gestation may produce undesirable results. A shortage of B-vitamins such as riboflavin, pantothenic acid, niacin and vitamin B_{12} during gestation, for example, may result in hypoglycemia in the baby pigs.

LAY CORNERSTONE

REHOVET, ISRAEL—The cornerstone was laid here recently in the Bet Volcani, an agricultural economics research institute projected as the main building of the Hebrew University department of agriculture. It is named in honor of the late Prof. Yitzhak Elazari Volcani, founder of the agricultural research station in Rehovot.

FEED MAN DIES

LIBERTY, KANSAS — Lynn C. Henderson, 71, a salesman for the Stone Mountain Grit Co. and a longtime operator of a feed store here, died June 30 at his home. He had suffered a stroke in January. He had been a feed store operator 20 years before becoming a salesman for the grit firm 14 years ago. Surviving are his widow, a son, a sister and two grandchildren.

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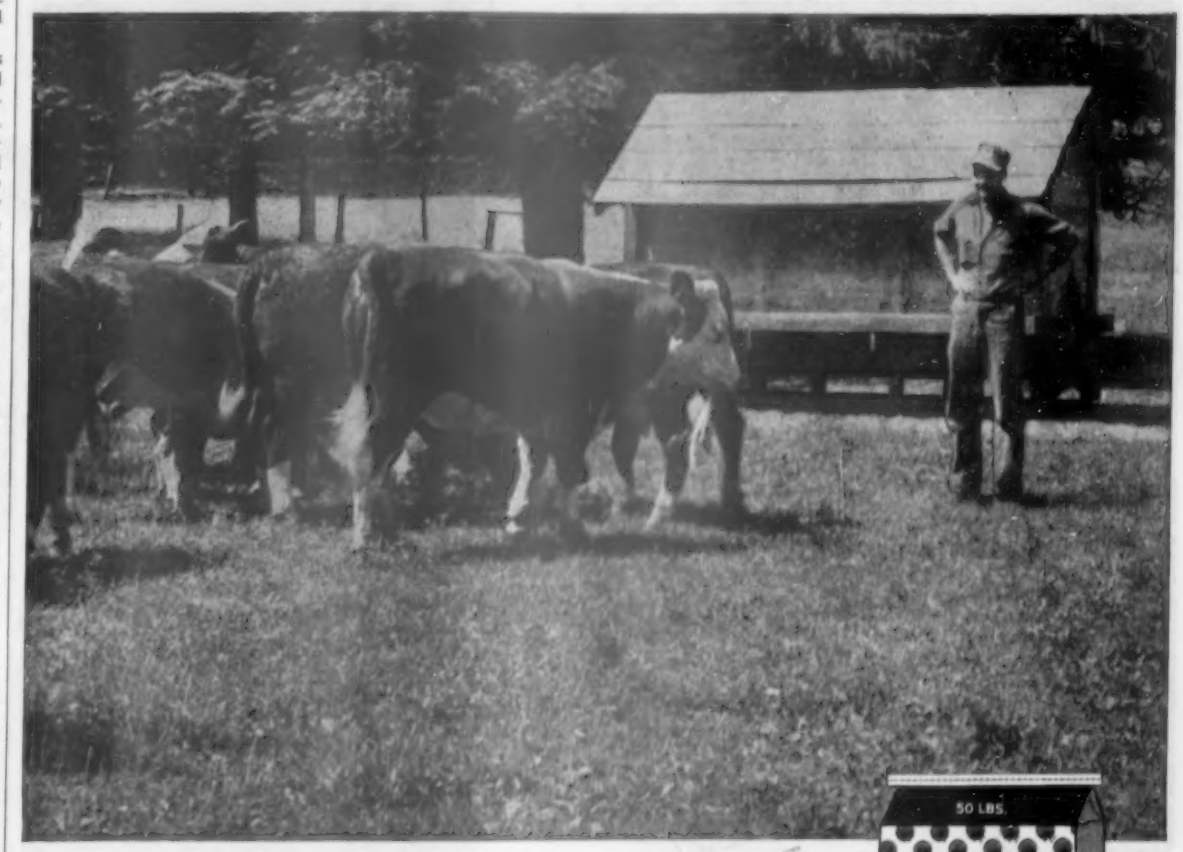

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Prenatal and Immediate Postnatal Nutrition of the Pig

By Dr. A. J. Wood
University of British Columbia

EDITOR'S NOTE: The accompanying article is a discussion of baby pig nutrition presented by Dr. A. J. Wood, division of animal science, University of British Columbia, at the Montana Nutrition Conference at Montana State College. Dr. Wood notes the importance of prenatal and immediate postnatal nutrition of the pig in rapid and efficient growth, and he outlines some enzyme and other research work.

v v

Recent scientific reports emanating from behind the Iron Curtain suggest that a great deal of emphasis is being placed on methods designed to improve their efficiency of swine production. If one can fairly judge their efforts to date from these reports, there is strong evidence that the western world is well in advance of them in the application of nutritional knowledge to modern swine production.

What of the future? This can only be expressed in terms of the present. In Canada the average bacon pig (and as you well know we only produce top quality bacon hogs) requires about 210 days to pass from birth to market. This means that our average animals spend about one-third of their life in utero and the remaining two-thirds at the mercy of the farmer and the feed manufacturer. This is the picture for the average.

In our own work we have found that these same pigs can be persuaded to express their full growth potential under the right conditions and reach their market weight in 125 days from birth. Under these growth conditions the animals spend almost half of their life in utero, and if one includes the suckling period of eight weeks, then more than two-thirds of their life is spent within the sow or closely dependent upon her for their nutriment. This means that they have a completely independent existence for a little more than two months.

Table 1 presents what might be called a target growth standard for the bacon pig and for purposes of comparison the present average values. The rate of growth suggested by this standard has been achieved under practical conditions.

TABLE 1. Achievable Growth Rate of the Bacon Hog

Age Weeks	Achievable Body Weight	Present Average Body Weight
Birth	3.0	2.8
1	6.0	4.0
2	10.0	6.8
3	16.0	8.5
4	22.0	12.0
5	28.0	14.5
6	35.0	16.5
7	43.0	20.0
8	56.0	24.0
10	90.0	32.0
13	140.0	40.0
16	180.0	60.0
18	200.0	76.0
21	....	100.0
24	....	128.0
27	....	166.0
30	....	200.0

When one makes a detailed study of the individual growth curves of large numbers of pigs, one soon discovers that some very profound factors are at work which begin to slow up the growth rate of the suckling animal between the 14th and 28th day of its existence. If a satisfactory source of iron and copper is provided from birth, the growth rate is improved slightly. Simple calculations reveal that at this critical time the sow becomes the limiting factor in the growth rate of her litter. With the best sow rations that can be designed, fed at the full intake level, the sow cannot consume sufficient feed to produce all of the milk energy that her litter requires. This is, of course, well known and has led to a great deal of research on the formulation of adequate creep feeds.

Sow's Milk

Before considering such creep rations, it is probably worthwhile to record once again the composition of average sow's milk (Table 2). The remarkable growth rate (10% per day) of the pig during its first week of life suggests that the sow provides a qualitatively excellent ration and one that deserves careful study if we are to succeed in designing a substitute.

TABLE 2. The Approximate Composition of Sow's Colostrum and Milk

	Sows Colostrum	Sows Milk	Cow's Milk
Total Solids	26.6	19.9	12.7
Fat	4.4	8.2	3.7
Solids-Not-Fat	22.2	11.7	9.0
Protein	17.8	5.8	3.3
Lactose	3.5	4.8	4.8
Ash	0.6	0.9	0.7
Calcium	0.05	0.25	0.12
Phosphorus	0.08	0.17	0.10

If we assume that most of the protein is utilized for the synthesis of new body tissues, then the suckling pig receives 20% of its energy from milk sugar and 80% from milk fat. Undoubtedly some of the protein serves an energy function, but for

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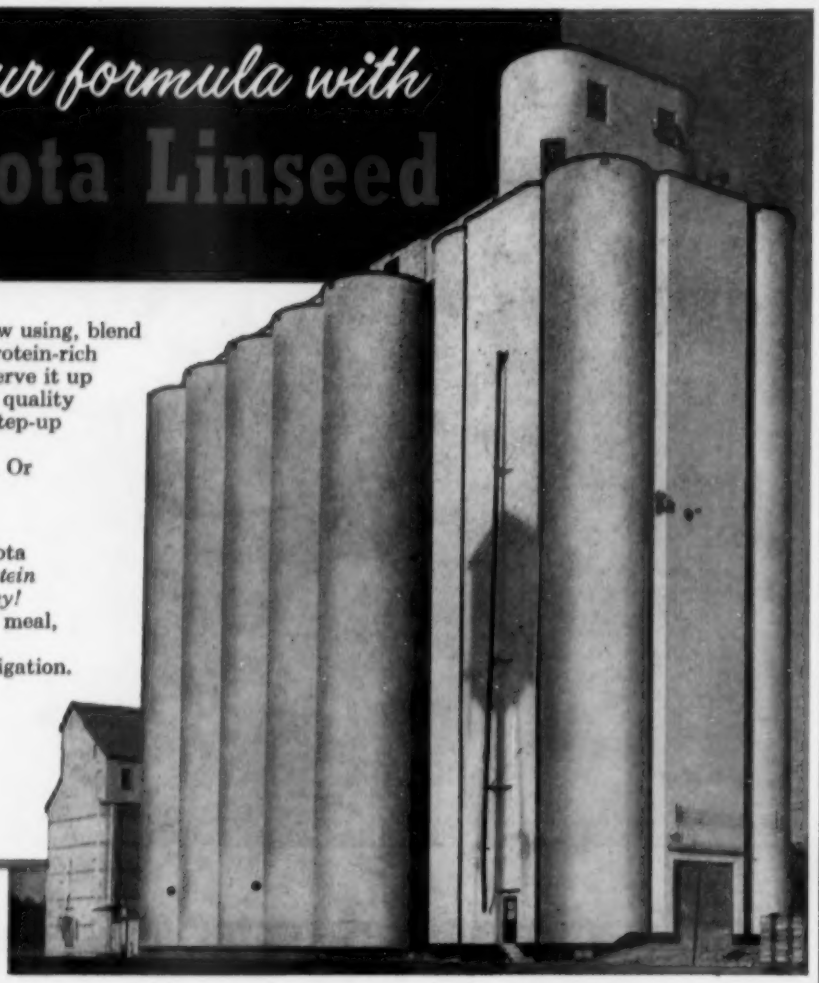

To the formulas you are now using, blend in a generous quantity of protein-rich Minnesota Linseed Meal. Serve it up to your feed customers as a quality mix, carefully balanced to step-up milk prouction and put a "finish" on feeder livestock. Or sell it straight, by the bag if you prefer.

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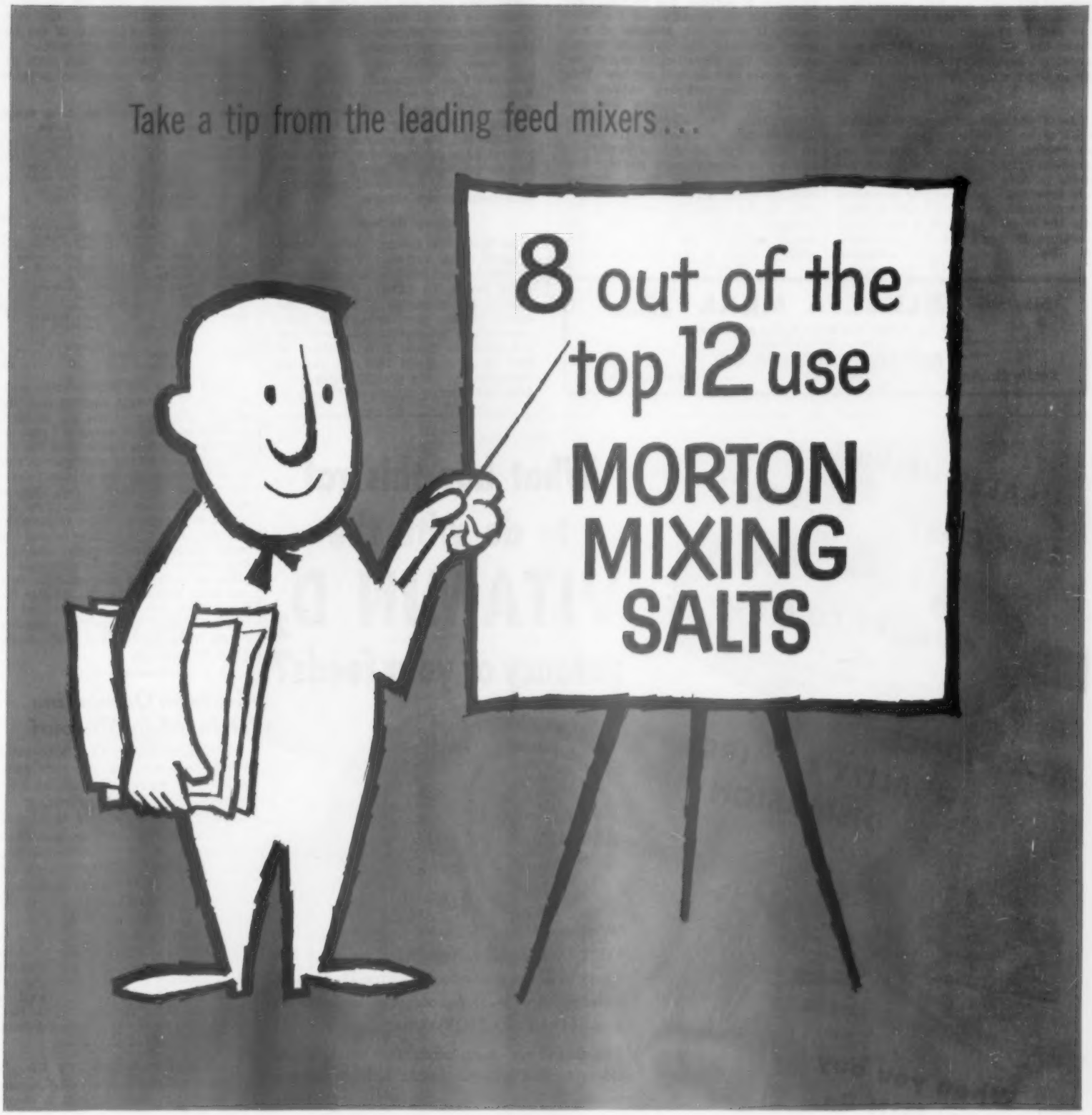

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present purposes it is safe to say that about four fifths of the energy needs are met from ingested fat. This suggests that an ideal creep ration will provide a large part of its feed energy in the form of assimilable fat.

Enzymes

As a preliminary to experimental feeding work, we have recently been examining the digestive enzyme secretions of the growing pig. Our results to date have surprised us. As we expected, the baby pig possesses the necessary digestive juices to handle the large allotment of fat that it receives. During the first three weeks of life it can produce adequate amounts of lactase, the enzyme necessary for the digestion of the milk sugar. It does not possess, in any great amounts, the enzymes necessary for the digestion of starch or the sugars sucrose and maltose. This suggests that ordinary rations designed for early weaning are not likely to be well utilized until later than 21 days unless they are based on fairly large amounts of skim milk powder to provide milk sugar. The exact age at which these enzyme changes occur depends to a considerable degree upon the weight of the growing animal. The higher the weight at birth, the earlier will the changes occur in the digestive secretions. We are not too clear as to where the recent American work on the proteolytic enzymes fits in this changing enzyme picture.

A recent report from Crampton's laboratory at Macdonald College indicates that the baby pig's ability to digest fat is markedly affected by the nature of the dietary fat. As might be expected, the shorter simpler fats appear to be most suitable. This work is a useful beginning which I am sure will ultimately lead us to more suitable swine creep rations.

Creep Rations

So much for theory. What about present creep rations? They are as variable in composition as most other swine feeds. To illustrate this variability, the formulas of some swine creep rations that have been used successfully in various countries are presented in Table 3. A scrutiny of this table suggests that the rations formulators have sought high protein-high energy rations that are adequately supplied with the necessary accessory factors such as the vitamins to permit utilization of the energy and protein. There appears to be general agreement that such rations should be offered in pelleted form.

TABLE 3. Some Typical Swine Creep Rations

American		British	
Rolled Oats	50	Barley Meal	22
Soya Meal	20	Wheat Offal	20
Corn Meal	15	Flaked Corn	20
Sugar	7.5	Dried Skim Milk	15
Fish Meal	2.5	White Fish Meal	15
Dried Whey	2.5	Dried Grass	5
Steamed Bone	1.0	Dried Yeast	3
Gr. Limestone	0.75		100
Salt	0.5	Canadian	
Trace Minerals	0.25	Ground Wheat	10
	100	Ground Oat Groats	15
Plus Vit. Supplement		Skim Milk Powder	37
New Zealand		Soybean Meal	10
Buttermilk Powder	65	Fish Meal	10
Ground Wheat	10	Dried Brewers Yeast	5
Ground Corn	7	Molasses	10
Meat Scraps	10	Vitamin Mineral Antibiotic Supplement	3
Sugar	8		100
	100		

What about the intra-uterine period? All of our data suggest that the physiological age of the pig at birth determines its subsequent rate of growth. This then means that the nutritional level of the multiparous sow is all important to the growth behavior of her new-born litter. Present recommendations (NRC) for the brood sow appear to be reasonable. Practice has a long trip ahead to come up to these recommendations. Our recent work on the influence of plane of nutrition on metabolic rate and body composition leads us to believe that the ultimate animal at market weight is largely a reflection of its intra-uterine and post-uterine plane of nutrition.

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Soybean Quarantine Delayed in Missouri

JEFFERSON CITY, MO.—Missouri's soybean cyst nematode quarantine has been postponed, at least temporarily, state Department of Agriculture officials have announced.

Originally to have become effective June 28, the quarantine was delayed in an attempt to avoid any unnecessary hardship on the soybean industry, according to Julius R. Anderson, state entomologist.

He said any quarantines would be applied only to infested fields or those strongly suspected of being infested. Two Missouri counties, Pemiscot and New Madrid, have been affected by the nematode. Arkansas and Kentucky also have some infested fields.

FARM ELECTRICITY UP

WASHINGTON—Farmers' monthly electricity bills were at a record high as of July, 1956, but per kilowatt hour costs were at a record low, according to the annual survey made last year by the Crop Reporting Board. Continued increases pushed the average monthly bill 4% above July 1955 to $10.40 a month in 1956 and 70% above the 1947-49 average. Increased use of electricity from an average of 196 kwh. per month in 1947-49 to 405 in 1956 has placed many farmers in the consumption bracket which gives them electricity at a relatively low cost.

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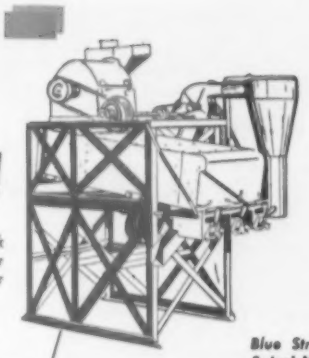
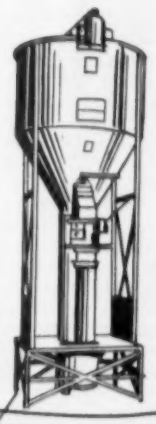


Blue Streak Corn Cutter and Grader



Blue Streak Twin Spiral Mixer with Semi-Automatic Sacking Scale

Prater Automatic Crusher and Feeder

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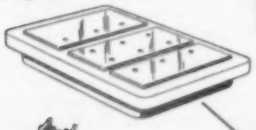
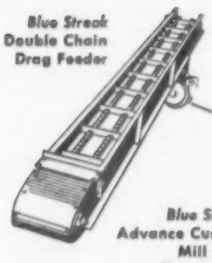
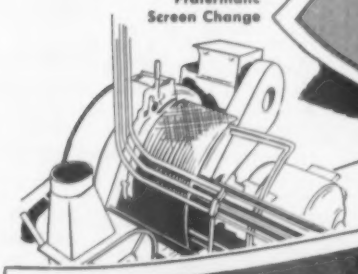
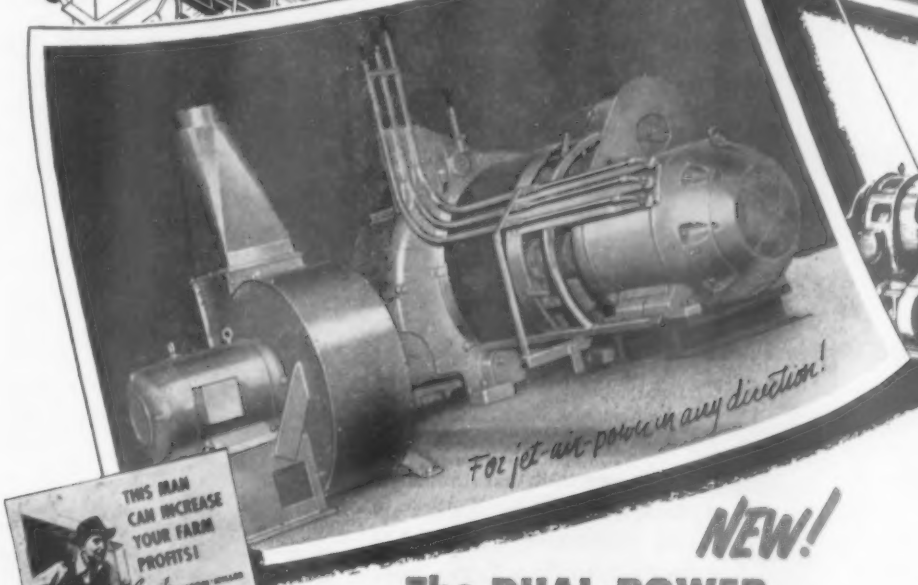


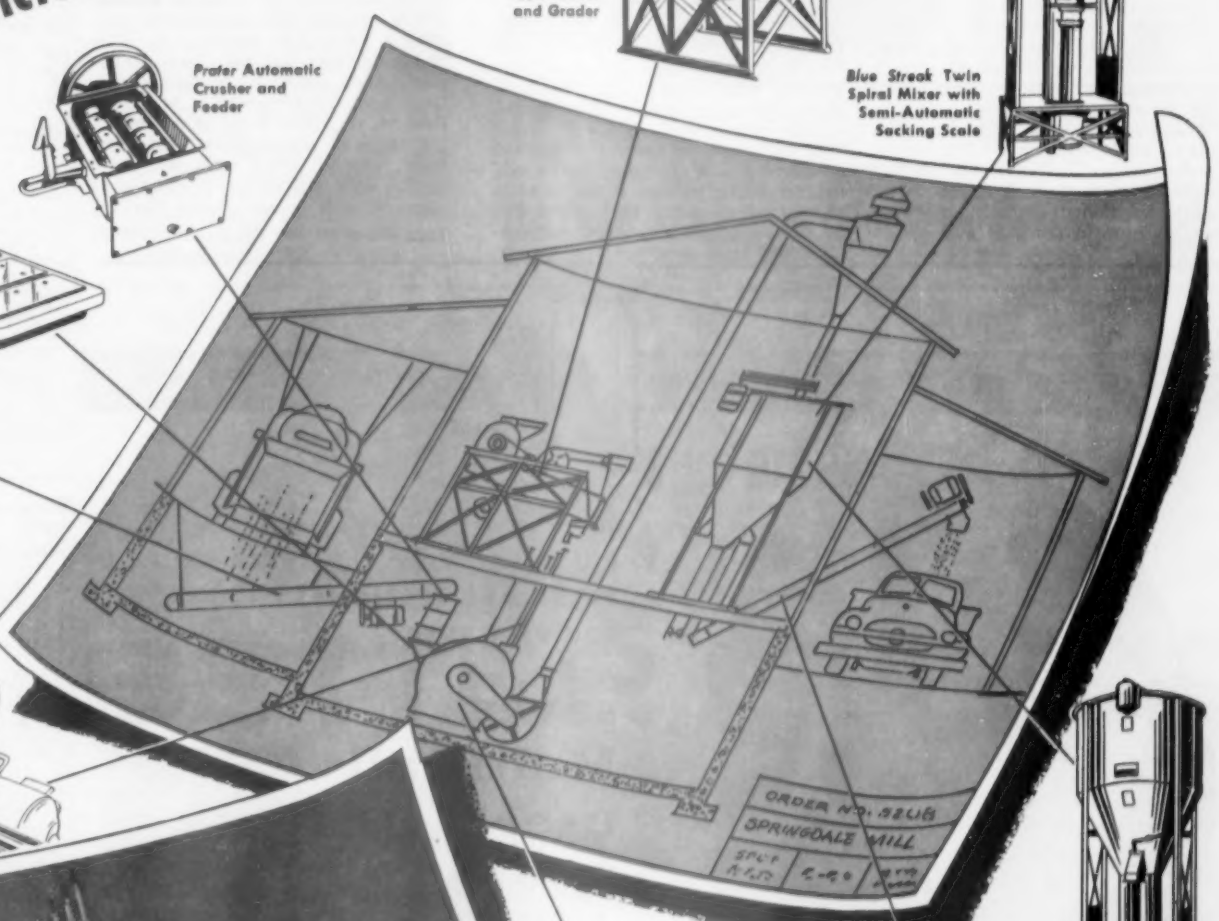


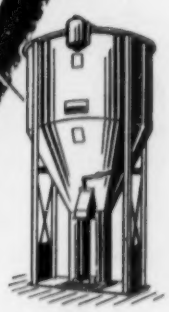
Blue Streak Double Chain Drag Feeder

Blue Streak Advance Custom Mill with Pratermatic Screen Change



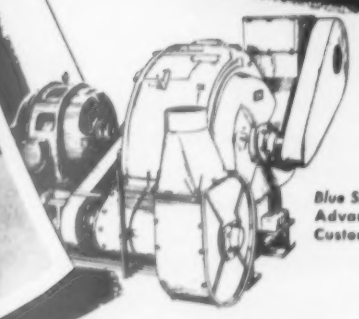






Blue Streak Twin Spiral Mixer

Blue Streak Vertical and Horizontal Screw Conveyors



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NUTRITION OF DAIRY COWS AND CALVES

(Continued from page 49)

nitrogen-free extract was noted on the tallow-containing feeds. Digestibility of crude fiber did not change and fat digestion increased. More calcium was excreted in the feces when tallow was fed. Carotene metabolism was not altered. These tests suggest that added fats have a lower value for dairy cattle than for poultry, in part at least, because of depressed digestibility of other nutrients.

Relatively little research has been directed toward measurement of the quantitative nutrient requirements of dairy calves and cows in recent years. This is unfortunate because reliable data are not available for many nutrients on which to base feeding recommendations, as pointed out by the National Research Council (1957). Most dairy nutritionists believe that rations of natural feeds of average or better quality furnish adequate amounts of the vitamins and mineral elements (except in some deficiency areas) for growth of calves and heifers. In view of this, considerable interest attaches to the findings of Jones et al. (1956), that calves gained faster when supplemented with a complete assortment of the vitamins and mineral elements than on a supposedly adequate basal ration or on the basal plus trace mineral elements. The importance is obvious of a need for further studies to determine whether supplemental amounts of all of the nutrients tested are beneficial, or only certain ones.

Hopper and Johnson (1955) have produced niacin deficiency in the calf by restricting intakes of the vitamin and of tryptophan. They point out that the young calf has no dietary requirement for niacin when adequate tryptophan is supplied.

Urea and Ammoniated Feeds

Many studies have shown that cattle do not have an exacting demand for high quality protein for growth or lactation. This has been confirmed again by Flipse et al. (1956) who found no difference between skim milk and soybean oil meal for growth or early spermatozoa production by bulls. Urea is now used successfully in many protein concentrates for dairy heifers and cows to supply 25 to 30% of the crude protein. Usually the feeding of grain mixtures containing urea has resulted in milk yields slightly, but not significantly, lower than mixtures containing natural proteins (Otagaki et al., 1956; Rust et al., 1956; Ward et al., 1955). Instances of unpalatable feeds have been reported when urea was used as the only nitrogen-containing supplement with cereal grains, but the use of common by-product feeds seems to prevent this (Loosli, 1956).

Some ammoniated feeds have not given satisfactory results with dairy cattle because of low availability of the nitrogen and other problems (Davis et al., 1955; Tillman et al., 1957). The earlier studies with urea were reviewed by Reid (1953).

Many other aspects of dairy cattle feeding, including the use of forages which cannot be considered because of lack of space, were reviewed by Smith (1957).

v v

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Five-year-old Willie had been taught that Sunday is not a day for play. One Sunday morning his mother found him sailing his toy boat in the bath.

"Willie," she scolded, "don't you know it's wicked to sail boats on Sunday?"

"Oh, that's all right, Mummy," he replied, calmly. "This isn't a pleasure trip. This is a missionary boat going to Africa."

◆ ◆ ◆

Two psychologists were talking. "I have a very interesting client," said one. "A case of a split personality."

"That's not unusual," replied the other.

"The unusual part is that I can get each split to pay a fee."

◆ ◆ ◆

A Washington newspaperman was checking the spelling of the name of a Virginian. "L," the reporter asked, "as in Lincoln?" The Southern gentleman roared back: "Certainly not, suh—L as in Lee!"

◆ ◆ ◆

In Chicago, a doctor posts this sign in his waiting room: "Ladies in the waiting room are asked not to exchange symptoms. It gets the doctor hopelessly mixed up."

◆ ◆ ◆

Conscience is that still, small voice that tells a person the other fellow may have a better lawyer.

◆ ◆ ◆

Politician: "My boy said that he would like a job in your department."

Officer: "What can he do?"

Politician: "Nothing."

Officer: "Good! That simplifies matters. We won't have to break him in."

◆ ◆ ◆

Guest (watching youngster pounding nails into furniture): "Joe, isn't that an expensive pastime your son has? How can you afford it?"

Joe: "I get the nails wholesale."

◆ ◆ ◆

Irate Golfer: "You must be the world's worst caddie!"

Caddie: "Hardly. That would be too much of a coincidence."

◆ ◆ ◆

A young mother finally tucked her small son into bed after an unusually trying day. That's when she sighed, "Well, I've certainly worked from son-up to son-down."

◆ ◆ ◆

The difference between an impractical dreamer and a man of vision is usually about two generations.

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FDA Chemist Wins Dr. Wiley Award

WASHINGTON—Lloyd C. Mitchell, research chemist of the Food & Drug Administration, has been picked to receive the annual Harvey W. Wiley award of the Association of Official Agricultural Chemists.

Mr. Mitchell is the first winner of the award, which was established last year to honor the "father" of the original Pure Food & Drug Law. The award consists of $500 in cash and goes to the scientist who makes an outstanding contribution to the development of methods for the analysis of feeds, fertilizers, pesticides, soils, foods, drugs and other products.

Dr. M. P. Etheredge, Mississippi State College, and president, AOAC, said it was particularly appropriate to confer the first award on a chemist who began his career as a laboratory helper in Dr. Wiley's laboratory.

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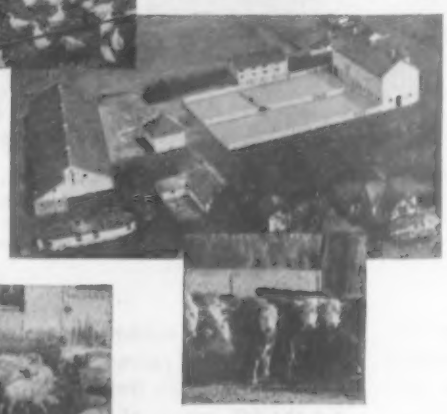

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It Pays to Maintain Good Public Relations

By Al P. Nelson

It had been an especially busy and hot day at the feed mill, and when Joe got home that evening, he really enjoyed a shower, and then a delicious roast chicken dinner, lemonade and sherbet. His twin sons, too, enjoyed the meal for they ate rather than argued, which was always a favorable sign.

But, Mary, Joe's slender and blue eyed wife seemed worried and even a little preoccupied.

"That's a swell meal, Mary," Joe said finally, folding his napkin, his face wearing a look of contentment. "You sure are a good cook."

"Do you really think so?"

"Why, of course, I do. I wouldn't say so if I didn't mean it. You know that."

"Well, I was just wondering."

Joe looked at his wife, and then at his boys, and his face wore a puzzled expression. "Isn't she a good cook, boys?" he asked.

"Yes!" chorused the boys.

But even this acclaim did not brighten Mary.

"Now this has gone far enough," Joe said. "What gave you the idea I didn't like your cooking?"

Mary sighed. "Well, I was going through your pockets in your second best business suit today and wanted to press it for you. And—and I found tickets for three church suppers next week. Then I got to thinking that you've been going to an awful lot of church dinners this summer. Sometimes you take us with you and sometimes you don't. It—it can only mean one thing—you don't like my cooking any more, so—so you take every excuse you can get to go out to eat." Mary looked close to tears. "And I work so hard to cook things you like."

Good Public Relations

Manlike, Joe opened his mind and let the winds of feminine peculiarities, sweep in. "Gosh," he blurted. "I never knew you'd look at it like that, Mary. I have to go to a lot of those church dinners. It's good public relations for me."

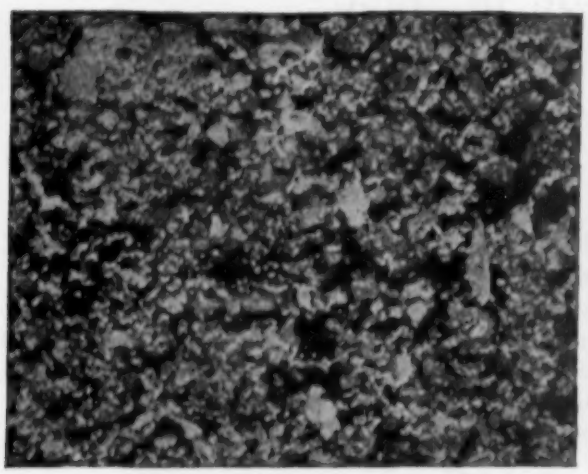
"I know all that," Mary said a little sadly. "But do you have to go to so many?"

"I'm afraid I do," Joe said. "I can't slight anyone. And Mary, I have met many farmers at those dinners and got some dandy new customers, too. It's something every business man must do, if he wants to be on his toes."

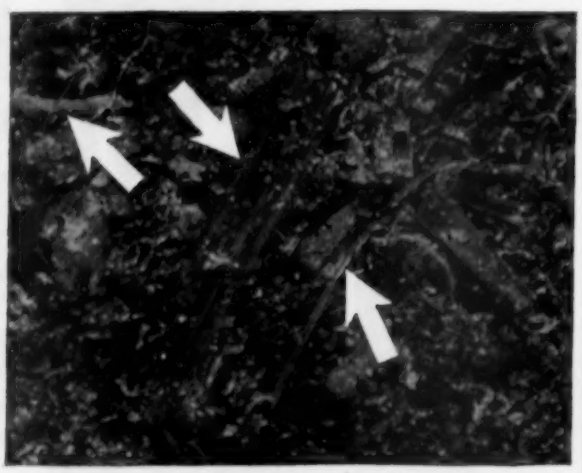
"Sometimes I wish you weren't in the feed business," Mary blurted out. "Sometimes I wish you had a corporation job like other men and worked 40 hours a week, so then you could be home with us more."

"Yeah, I've felt that way myself now and then," Joe said. "Especially when I have trouble collecting money due me and when feed shipments don't arrive on time and many other things. And at income tax time, with all its red tape. But then when I have good days, and things really roll, when I get new customers and the cash register keeps ringing all day long, then I'm the happiest man in the world. That's life, up and down.

New High in Protein Quality Makes the Difference in Swift's ANIMAL PROTEINS



SEE FOR YOURSELF how Swift's quality meat and bone scrap (above) is even-textured and noticeably free from vegetable fiber. The well-cooked chunks of meat are rough-surfaced, while the whiter bits of bone are about the same size. *Photomicrographs enlarged 10 times.*



HAIR, FUZZ AND VEGETABLE FIBER, shown by white arrows, above, dilute the feeding value of poorly processed animal proteins. These materials, and others which reduce the feeding value of animal proteins, are held to a minimum by Swift's quality processing.

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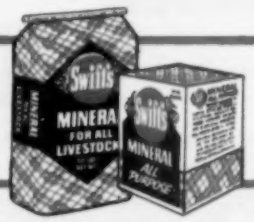

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I guess it can't be any different, or can it?"

"I saw a sign once," Mary said. "It said 'Work hard 40 hours a week and then maybe you can get to be boss and work 70 hours a week for very little more pay.' But you work longer than 70 hours a week, Joe."

"I do not. You can't count going to church suppers working. I have to eat somewhere. And lots of times you and the twins go along. You seem to enjoy those dinners, too."

"Oh, I do, now and then. But not so many. Every true housewife likes to make lots of meals in her own kitchen. Can't you understand that?"

"No, I can't," Joe said. "If I were a woman and my husband came home and said he was taking me out to dinner, I would jump at the chance."

"You don't know much about women," Mary said. "Especially me. A woman likes to shop at a sale once every two weeks, but she doesn't want to shop for bargains every day. She gets tired of it."

"I get tired of lots of things in my business, too," Joe said slowly. "But I have to put up with them. Now about this matter of church dinners. I like them, and I like to meet and talk with farmers, and they like to have me there. Some of them even tell me they can spot every business man in town by his actions. Some of those business men never go to farmers' doings and the farmers know it, and hold it against them."

"They shouldn't."

Obligations of a Feed Dealer

"Maybe not, but farmers are that way. When you are in business, especially selling to farmers, you've got certain obligations, namely to be deeply interested in what they like and are doing, and you've got to attend many of their dinners and meetings."

"When I grow up," Joe Jr. said to Jimmie, "I'm never gonna get married. I don't wanna argue all the time like Mama and Papa do."

"We are not arguing!" Joe said sharply. "How many times do I have to tell you that? We are only discussing problems."

"Well," said Mary, "now that we have threshed this matter out, we might as well make up our minds we are going to three church suppers next week. Chances are one will be roast beef, another fried chicken and the third perhaps chopped beef. Looks like I'll have to work in veal, pork and seafood into the rest of the meals we have at home."

Joe smiled happily. "One thing I admire about you, Mary, is that you can always adjust to a problem. I have to do that in business many times."

"I have to adjust to a husband who wants his way, too," Mary said wisely, "although I'm warnin' you," and she smiled, "I'm going to hold out now and then just for the satisfaction of having my way once in a while."

"As though you didn't, most of the time," Joe thought. But being a man, he just smiled sweetly and said nothing.

Sugar Fed to Pigs In Louisiana Test

NEW ORLEANS—Rations containing sugar fed to baby pigs resulted in faster gains, Louisiana State University reported, and the tests were hailed by the American Sugar Cane League as a potential boost for sugar sales.

Gilbert Durbin, general manager of ASCL, said the sugar-eating pigs gained weight faster than pigs that weren't fed sugar rations, the feed efficiency was improved and the pigs were marketed earlier, retaining more weight in transit.

The tests showed that hogs fed sugar 48 hours before shipment to market lost much less weight en route than hogs that had not been fed sugar.

"Hogs with a sweet tooth," Mr. Durbin observed, "may create the biggest market in America for the sugar industry."

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UP OR DOWN?

By Leonard W. Schruben

Agricultural Economist, Kansas State College

Barley Acreage and Production

For some time you should have been adjusting your purchasing and inventory program to this year's barley crop. Because of the importance of this year's crop, you will be interested in how its size compares with the amount produced in earlier years. Also, you will be interested in how the before-harvest estimates compare with the estimate made at the end of each season.

The acres planted, acres harvested and bushels of barley produced each year since 1930 are shown in Exhibit 1. This is shown to give you an idea of the trends in output during the past 27 years and a basis for comparing the prospective crop this year with that of earlier years. You can get a good idea as to the relative size of this year's crop by examining Exhibit 1 and comparing it with this year's estimates as they are released by the Crop Reporting Board.

EXHIBIT 1—Barley: Acreage and Production, U.S., 1930-56.

Year	Acres Planted (thousands)	Acres Harvested (thousands)	Production (thousand bushels)
1930	13,581	12,629	301,619
1931	13,820	11,181	200,280
1932	14,455	13,206	299,394
1933	14,200	9,641	152,839
1934	12,024	6,577	117,390
1935	13,956	12,436	288,667
1936	12,837	8,329	147,740
1937	12,346	9,969	221,889
1938	12,171	10,610	256,620
1939	16,513	12,739	278,193
1940	15,689	13,526	311,278
1941	15,857	14,276	362,568
1942	19,686	16,958	429,450
1943	17,474	14,900	322,913
1944	14,352	12,301	276,275
1945	11,745	10,454	266,994
1946	11,467	10,380	265,059
1947	11,981	10,955	281,868
1948	13,043	11,905	315,537
1949	11,132	9,872	237,071
1950	13,100	11,165	303,772
1951	10,869	9,424	267,213
1952	9,359	8,236	228,168
1953	9,659	8,680	246,723
1954	14,759	13,370	379,254
1955	16,335	14,564	401,225
1956	14,712	12,827	372,495

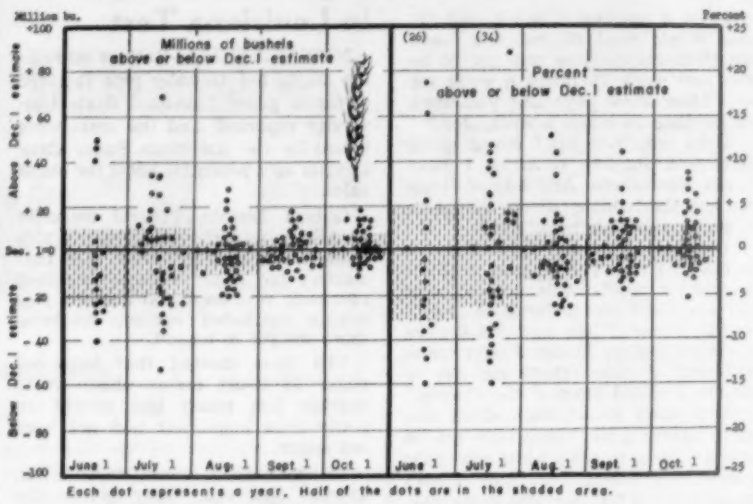
In order for you to do a better job of interpreting the early estimates of barley production, we have made a few comparisons of earlier years' estimates for you. These comparisons are shown in Exhibit 2.

Two kinds of comparisons are shown in Exhibit 2. One is in terms of bushels and the other in the percent relating each month's estimate to the final estimate made at the end of the year. The bushel comparison is on the left side, the percent on the right.

Here is how to read Exhibit 2. For example, in the column for the July 1 estimate, you will find a dot at the +70 level. This means that for one year, the estimate made as of July 1 was 70 million bushels more than the estimate made the December after harvest.

Each dot represents one year. The middle range of dots is in the shaded area. Although the under-estimates are more scattered, you will notice that about one-half of the dots indicate July 1 estimates within 5% of the Dec. 1 estimate. This would be considered as very good.

EXHIBIT 2—Estimates of barley production, U.S., 1920-56.



Each dot represents a year. Half of the dots are in the shaded area.

General Price Situation

It is too early to have a good picture of barley price patterns this coming crop season. However, all feed grain prices are likely to be under heavy downward pressure if a normal growing season develops. Feed grains are in ample supply to meet expected requirements if a reasonably favorable growing season prevails, and this large supply can be expected to exert increased downward pressure on prices.

Normally barley prices decline through the summer months. There isn't much reason to expect this tendency to be greatly changed this year.

Wool Growers Plan August Convention

SAN FRANCISCO—A panel on nutrition and animal health is a feature subject of the 97th annual convention of the California Wool Growers Assn., scheduled to be held at the Stockton Civic Auditorium Aug. 7-8.

Latest information on sheep nutrition, pellet feeding and antibiotics will be discussed by panel members Jerry Sotola of Armour's Livestock Bureau, Armour & Co., Chicago; Dr. Arthur Boyd, assistant director, California Department of Agriculture, Sacramento, and Dr. Donald Jasper, dean of the School of Veterinary Medicine, University of California, Davis.

A second panel, on the progress in orderly marketing of Imperial Valley and spring lambs, is also to be featured with Stewart Kern, president of the Imperial Valley Lamb Feeders Assn., Brawley, joining with several others. W. Hugh Baber, chairman of the California Lamb Committee, Chicago, will moderate this panel.

There will be a full discussion of the drastic break in California spring lamb prices which occurred in late June, particularly on feeder lambs, and how this break might affect supplier industries, such as feeders and feed suppliers.

Other subjects for discussion include one on lambs and wool, led by O. V. Wells, administrator, Agricultural Marketing Service, USDA, and a panel discussion on recreational use of private land.

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Parakeratosis—A Nutritional Disease of Swine

● Richard C. Wahlstrom, animal husbandry department, Agricultural Experiment Station, South Dakota State College, Brookings; Circular No. 137.

Two trials, involving 93 weanling pigs, were conducted in a study of the development of parakeratosis as a result of variation in the amount and source of calcium in the ration. Zinc was also evaluated as a preventive or cure for the disease.

Although good growth resulted from the feeding of a corn-soybean oil meal ration containing 0.65% calcium, a 5% incidence of parakeratosis was noted. When the calcium content of this type of ration was increased to 1% or more, the result was poorer growth and a 40% incidence of parakeratosis.

When zinc was added to this high calcium ration at a level of 62 parts per million, the symptoms of parakeratosis were prevented and the pigs grew at an increased rate. In those instances where the disease was already present, the use of the zinc supplement in the ration produced a marked increase in the rate of growth. In addition, there was an alleviation of the skin lesions.

Good growth, with no incidence of parakeratosis, resulted from the feeding of rations containing an animal protein and a calcium content of 0.63 and 1.13%. When the mineral supplement, consisting of steamed bone meal, ground limestone and trace mineralized salt, was fed free-choice with a mixture of ground corn and soybean oil meal, there were no symptoms produced indicative of parakeratosis. In another lot, the mineral supplement was added to the soybean oil meal at a level of 12%. This mixture, containing 4.0% calcium, was fed free-choice with corn, resulting in poor growth but no incidence of parakeratosis.

The author also describes the symptoms of parakeratosis as he observed them in these trials.

COMMENTS:

The skin disease of swine, known as parakeratosis, has become increasingly prevalent throughout the U.S. during the past few years. Investigators at the University of Minnesota described this disease in 1953. These workers also indicated that the nutrition of the animal was involved in the production of the disease.

More recently reported research from several sources has proven the association of high levels of calcium and phosphorus in the ration with the incidence of this disease. These various workers have also shown the curative effect of zinc when added to such rations.

However, there are still several reports of cases of parakeratosis being found on farms. There appears to be wide variations and individual differences in the severity of the symptoms and duration of the disease. Some pigs may not show any indications of the disease while others on the same rations will show mild or severe symptoms. While death losses are usually quite low, the economic loss resulting from poor growth and reduced feed efficiency can be quite severe.

Unfortunately, instances occur in which there are outbreaks of this disease, even though zinc is being added to the ration. Parakeratosis

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Test Initiated October, 1956 **Duration of Test—109 days**

Steers were selected for uniformity and divided into 5 groups receiving 0, 0.5, 1.0, 1.5 and 2.0 grams Dynafac per steer per day. The results of this test are tabulated below:

Dynafac gm./head/day	0	0.5	1.0	1.5	2.0
Av. Initial Weight (lbs.)	871	898	880	895	870
Av. Final Weight (lbs.)	1133	1158	1172	1216	1214
Av. Total Gain (lbs.)	262	260	292	321	344
Av. Daily Gain (lbs.)	2.38	2.36	2.65	2.92	3.13
Feed Consumed per 100 lbs. Gain	1103	1067	1016	973	892
Feed Cost per 100 lbs. Gain	$22.79	$22.12	$21.12	$20.29	$18.64

The average daily ration consumed per steer was:

Dynafac (grams)	0	0.5	1.0	1.5	2.0
Corn (lbs.)	18.36	17.61	18.85	19.86	19.50
Alfalfa Meal (lbs.)	5.44	5.22	5.59	5.89	5.78
Linseed Meal	.83	.80	.85	.90	.88
Dehydrated Alfalfa Meal (lbs.)	.31	.29	.32	.33	.33
Molasses (lbs.)	1.56	1.49	1.60	1.69	1.66
TOTAL RATION (lbs.)	26.50	25.41	27.21	28.67	28.15

*Armour brand tetra alkylammonium stearate

Comments: It will be noted that feed efficiency was improved by each addition of Dynafac to the ration.

With the exception of the 0.5 gram Dynafac per steer per day, the total feed consumed was greater for the Dynafac lots. Because of the greater rates of gain and improved feed efficiency the cost of putting on 100 lbs. gain was reduced--amounting to a saving of $4.15 per 100 lbs. gain for the group receiving 2.0 grams Dynafac per day.

Dynafac is distributed nationally for Armour by the Chemical Department, McKesson & Robbins, Inc. For further information, contact your nearest McKesson chemical warehouse.

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usually develops when rations high in calcium are fed. However, it sometimes occurs on rations containing lower levels of calcium.

The results of these trials at the South Dakota station showed that zinc (as zinc carbonate), added to the ration at the rate of 62 parts per million, was quite effective as a preventive and completely cured all symptoms of the disease. On the other hand, 20 parts per million of zinc have also been shown to be equally effective in preventing parakeratosis. Wahlstrom indicates that "the effective level may vary with the calcium content of the ration."

Earlier observations at the South Dakota station indicated that the symptoms of parakeratosis appeared most frequently in swine fed rations supplemented with plant proteins. However, the workers at this station have recently observed several cases of the disease in pigs fed rations containing animal protein supplements. On the other hand, the typical symptoms were not observed at this station when the animals were fed cereal grains and a protein supplement on a free-choice basis. Wahlstrom reported that the disease was most prevalent during the fall and winter feeding trials and in animals from weaning age to 100 pounds in weight.

Wisconsin Study

Some experimental results recently reported from the University of Wisconsin indicate that the method of feeding may aid in controlling stubborn cases of parakeratosis. These results from Wisconsin served to confirm some work reported earlier by European investigators in which they found that pigs fed a wet feed appeared to be less susceptible to a disease similar to parakeratosis.

However, the Wisconsin workers found that wetting the feed did not protect the animals against the disease unless it was hand-fed. The incidence of the disease symptoms was just as great in hogs that had wet feed readily available to them at all times as in hogs that received the same ration in dry form on a free-choice basis. On the other hand, hogs that were hand-fed the dry ration were not protected against the disease.

It has been concluded by these Wisconsin researchers that, in order to control the disease by the feeding method, it is necessary to not only feed the ration in wet form but it must be fed twice a day in amounts which the pigs can eat in an hour.

The results of the South Dakota trials and the results from other stations indicate that it is very important to avoid the addition of high levels of calcium to swine rations. This is especially important for young growing pigs. It should be kept in mind that, since many protein supplements contain 3.5% or more of calcium, it is quite possible to formulate a ration containing 1.0% of total calcium through the use of these supplements. The use of such supplements on a free-choice basis can also result in excessively high levels of calcium intake.

It appears that the addition of zinc to the ration, especially for young growing swine, is the best and most practical way of eliminating swine parakeratosis. Zinc oxide at the rate of ¼ lb. per ton of complete ration and other zinc compounds, such as zinc sulfate added at the level of ¾ lb. per ton of complete feed, have been found to be quite effective in protecting pigs against this skin disease.

However, it is necessary to add the zinc compound on the basis of the total feed intake and to keep the zinc supplement in the ration constantly. In one experiment, pigs were fed a ration that contained a zinc supplement at 10 times the recommended level for two weeks. Two weeks after the feeding of the zinc supplement had been discontinued, signs of parakeratosis appeared. Thus, it is apparent that swine cannot store zinc in their bodies in the amounts necessary to protect against parakeratosis after the zinc supplement is removed from their diet.

There is some tendency on the part of diagnosticians to report all cases of unhealthy skin conditions as parakeratosis. This, unfortunately, happens quite often in the case of many diseases which have been or are presently brought into the "lime-light" through the popularized presentation of copious amounts of experimental results on the particular disease. In many instances, mange is the cause for the skin condition which has been brought to the attention of the diagnostician.

It should be made a general practice to treat all swine for mange and to add zinc at the recommended level to the rations being fed to all ages and sizes of hogs.

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McMILLEN FEED SALES—Ralph Westland has been promoted to territory manager in northeastern Wisconsin by McMillen Feed Mills, Ft. Wayne, Ind. He has been with the firm since 1953, earlier being assistant territory manager and on special assignment in Ohio. He is a graduate of Indiana State University.

S.E. Poultry Group Picks Atlanta Office

RICHMOND, VA. — Headquarters of the Southeastern Poultry & Egg Assn. will move from 615 E. Franklin St. here to Atlanta some time this fall, Leland Bagwell, president, of Canton, Ga., has announced.

Harold Ford, Decatur, Ga., who has served as director of organization of the association for the past 2½ years, will become executive secretary of the group, succeeding Paul Williams. Mr. Williams, who has headed the staff for both the Southeastern association and the Virginia State Poultry Federation since February, 1955, will continue to serve both organizations as legislative representative and editor-in-chief of the two association magazines, the Southeastern Poultryman and the Virginia Poultryman. He will also continue to serve as executive secretary of the Virginia Federation.

Bob G. Doan has been employed as managing editor of both the Virginia and Southeastern magazines which will continue to be published in Richmond. He succeeds John T. Sherrill who resigned several weeks ago to become associated with Blanton Smith Hatcheries, Nashville, Tenn.

Elmo Hester, editor of the publications for the past two years, left the staff at the end of June to assume the editorship of the Georgia Farmer in Atlanta.

Mr. Bagwell said the transfer of Southeastern's offices to Atlanta had been contemplated for some time because Atlanta is more centrally located to the major poultry production areas of the Southeast. Atlanta also is the site of the annual convention.

MILL RESUMES BUSINESS

LAMBERTON, MINN. — The Farmers Elevator Co. resumed feed grinding and mixing recently after a seven-month period of inactivity caused by fire.

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No. 5763—Laboratory Pellet Mill

A new laboratory model pellet mill, employing the basic operating principles of the larger production-size CPM models, has been introduced by the California Pellet Mill Co. Company officials state that the mill permits feed manufacturers to conduct tests and experiments in

their own laboratory and using their own personnel, at a modest investment in equipment. This makes it possible to maintain complete control of experiments and permits closer and more complete evaluation of the many factors involved in research and development programs. Officials add that a laboratory mill permits greater plant flexibility because there are no interruptions in regular production caused when a pellet mill is unavailable because of testing runs; there is no contamination because of experimental ingredients being mixed with regular production runs; and tests often involve expensive and critical materials such as vitamins and antibiotics. The mill is 32 by 32 by 50 in. and is portable. The capacity is approximately 50 lb. hourly of 3/16 in. pellets made of mash type materials. Check No. 5763 on the coupon and mail it to secure complete details.

No. 5762—Vitamin A Requirements

Vitamin A requirements of common livestock in terms of U.S.P. units per ton of feed are tabulated in the new buyers' guide entitled, U.S.I. Permadry "Sealed In" Vitamin A, published by U.S. Industrial Chemicals Co., division of National Distillers & Chemical Corp. The data sheet also describes how U.S.I. Permadry is used to supply vitamin A requirements. The bulletin states that the product is "protected against deterioration by incorporating it in small spheroids of hydrogenated vegetable fat." A copy of the data sheet is available at no charge to nutritionists and feed manufacturers. Check No. 5762 on the coupon and mail it to secure a copy.

No. 5764—Turbine Type Mixer

The T. L. Smith Co. has introduced a turbine type mixer which "is built in sizes small enough to work with the smaller (feed) mills and large enough to handle high production in the large mills." The company states that the mixer "functions with both dry and mash type and blends at an extremely high rate of speed." The unit has a

doughnut shaped mixing drum and the drive mechanism is located in the center of the drum. It is the drum shape which gives a "live mix", company officials state. Basically, it is a stationary type mixer but it is equipped with a lifting hook. The three sizes available have over-all heights of approximately 48, 56 and 59 in., respectively, and handle 17½, 35, and 53 cu. ft. dry batches, respectively. Secure details by checking No. 5764 on the coupon and mailing it to Feedstuffs.

No. 5759—Calculator

Free distribution is being made of a P.N.W. (Partial Nutritional Worth) calculator by the National Renderers Assn. to any one who has an interest in formula feeds. Instructions on how to use the device are printed on the calculator. Corn and soybean oil meal are used as the basis for the cost calculations. Secure the calculator by checking No. 5759 on the coupon and mailing it to Feedstuffs.

Also Available

The following new products have been described in previous issues of Feedstuffs and information about them may still be obtained by jotting the appropriate number on the coupon and forwarding it to Feedstuffs.

No. 5727—Dimple-faced pellet mill rollers, Landers Mill Manufacturing Co.

No. 5728—Portable lighting fixture for illuminating interiors of storage silos, Crouse-Hinds Co.

No. 5729—New design centrifugal collectors, Kirk & Blum Manufacturing Co.

No. 5730 — Pneumatic conveying system for unloading cars, Sprout, Waldron & Co., Inc.

No. 5731—Plastic metering device for medicating poultry drinking water, Chas. Pfizer & Co.

No. 5732—Jack belt conveyor for use with vibrating bag packer and sewing machine, Richardson Scale Co.

No. 5733—Sewing head attachment for automatically starting and stopping the sewing head and cutting thread chain, Union Bag-Camp Paper Corp.

No. 5734—Surface protective spray and surface fumigant, Douglas Chemical Co.

No. 5735—Broiler-layer dehydrated alfalfa meal, National Alfalfa Dehydrating & Milling Co.

No. 5736—Automatic bag closing machine, Hamer Machine Co.

No. 5737—Grain sanitation service, Douglas Chemical Co.

No. 5738—Device for udder sanitizing, Vineland Laboratories, Inc.

No. 5739—Device for measuring out small amounts of powdered flavors, Taste Engineering, Inc.

No. 5740 — Chain-type suspended automatic feeder, Keen Manufacturing Corp.

No. 5741—Telescoping hoist mechanism for line of auger elevators, West Fargo Manufacturing Co.

No. 5742—Water-soluble Terramycin turkey formula, Pfizer Laboratories Department of Veterinary Medicine

No. 5743—Portable screw conveyor, Baughman Manufacturing Co.

No. 5744—BHT antioxidant additive, Koppers Co., Inc.

No. 5745 — Portable pneumatic grain handling unit, Myers-Sherman Co.

No. 5746—Unidentified growth factor product, Specifide, Inc.

No. 5747—High speed, fine finish mixer, Strong-Scott Manufacturing Co.

No. 5748—Fly control chemical which acts as a barrier to insects, Glenn Chemical Co.

No. 5749—Dry powder molasses flavor, Flavor Corporation of America.

No. 5750—Brochure on 34 models of scales, Exact Weight Scale Co.

No. 5751—Poultry feed fortifier (vitamins and minerals), Borden Co.

No. 5752—Trace mineral salt products, International Salt Co.

No. 5753—Whey products booklet, Western Condensing Co.

No. 5754—Rotary steam dryer for feed ingredients and grains, V. D. Anderson Co.

No. 5755—Literature on treatment of calf scours, swine dysentery, etc., Squibb division of Olin Mathieson Chemical Corp.

No. 5756—Automatic bagging scale folder, Richardson Scale Co.

No. 5757—Folder on benefits of seed treatment, Panogen, Inc.

No. 5758—Flexible coupling for shafts, Dodge Manufacturing Co.

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- ☐ No. 5763—Laboratory Pellet Mill
- ☐ No. 5764—Turbine Type Mixer
- ☐ No. 5759—Calculator

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R. P. Kessler

TO HEAD RESEARCH — The appointment of R. P. Kessler as director of research and development for the bag and package manufacturing firm of Arkell & Smiths has been announced by S. S. Yates, president and chairman of the board. Mr. Kessler has been packaging engineer and director of packaging research for Arkell & Smiths for 11 years. He is a member of several national industrial technical committees and has written numerous publications about packaging research.

North Carolina Adopts New Milling Grade Standards for Corn

WASHINGTON — New milling grade standards for corn have been adopted by the North Carolina board of agriculture. The action marks the first time since the early years of the U.S. Grain Standards Act that a state government has promulgated standards different from federal standards.

This was reported by the Washington office of the Grain & Feed Dealers National Assn. in a report to secretaries of affiliated organizations.

The report said proposed certificate forms have been sent by the North Carolina department of agriculture to the grain division of the Agricultural Marketing Service for approval.

"As the North Carolina new milling corn standards are different from the U.S. grain standards for corn, it is unlikely that USDA can or will approve any grade certificate forms that denote interstate character," the report said.

"It may be, however, that the state of North Carolina can promulgate different standards and issue inspection certificates for corn transported only within its boundaries. Movement of out-of-state corn for milling into North Carolina or movement of North Carolina corn across state lines could develop into grading complications," the report continued.

Milling corn standards adopted by the state read: "In addition to (other factors) the following grade specifications are hereby established for milling corn, white, yellow or mixed."

Grade 1 calls for 56 lb. minimum test weight, 14% moisture, 1% cracked corn and foreign material and a total of 2.5% damaged kernels. Limits allowed for damage are insects, 5%; Blue eye mold, .1%. Grade 2 has a minimum test weight of 54 lb., 15% moisture and 2% cracked corn and foreign material. Damaged kernels of 4% are allowed with 1% for insect damage, .1% for heat damage and .5% for Blue eye mold.

Other specifications for both grades are that they must be free from rodent, bird and other contamination; cool and sweet odor; free of stone, cinders, glass and similar materials; class of corn is the same as in the U.S. standards and the corn is weevilly if it contains one or more live weevils or five other insects injurious to grain.

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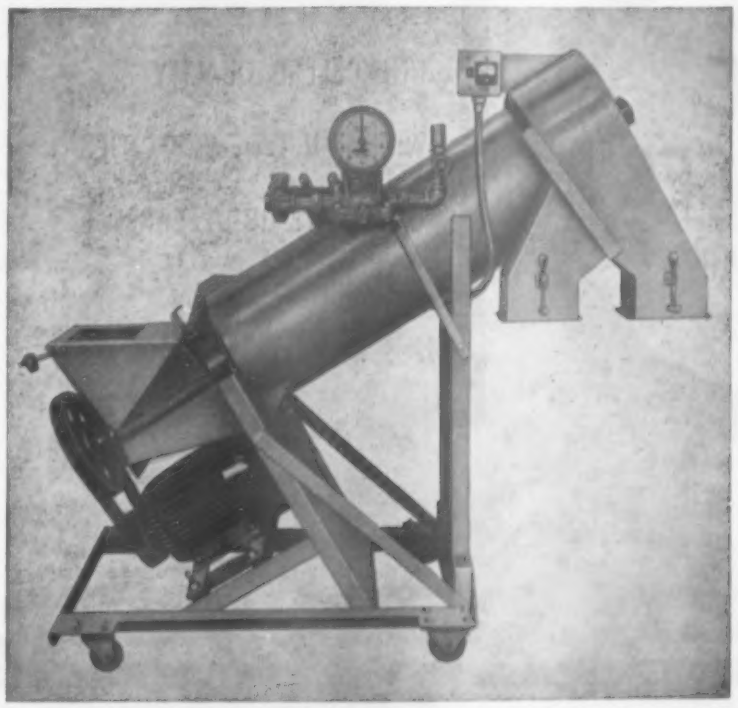

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STRONG-SCOTT'S New Porta-Blend Produces a highly uniform product when blending dry mix with a liquid. It is a compact, portable, low-cost, continuous type blender, ideal for the small or custom mill. It blends an accurately measured amount of liquid (varying in viscosity from water to that of heavy molasses) with a controlled amount of dry ingredients, resulting in an end product blended to perfection.

Uniform blending is the result of moderate-speed blending and folding action taking place as the material is gradually carried upward by twenty-five paddles to the discharge end of the chamber. Sacking the end product is no problem with the fast-acting double bagger, complete with a two-way flow selector. A single all-steel Screw Feeder through the feeder in-let and blending chamber is caged in long life bearings at each end. One large clean-out door and a convenient drain plug offer ease of cleaning and flushing.

Lightweight, Portable: Welded, all-steel construction. Rubber-tired swivel casters make it easily movable. Flexible neoprene hose permits use any reasonable distance from the liquid supply—a one man operation.

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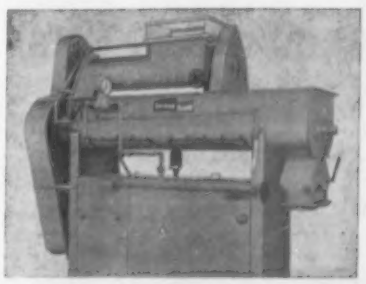

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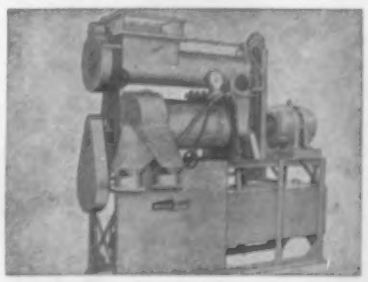

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CEREAL GRAINS AND LIVESTOCK

(Continued from page 24)

sheet that of the grain and grain-byproduct feed fed to food-producing livestock, 43% goes to hogs, 23% to poultry, 20% to dairy cattle, 10% to beef cattle, and 4% to sheep.

During the last 20 years there has been a decisive upward trend in the available supply of grain and of oilcake and meal for each animal unit, and in the production for each animal. The grain supply for an animal unit each year increased from 23.6 bu. to 33.6 bu. The oilcake and meal supply increased from 45 to 107 lb. each animal unit. The production of eggs increased from 132 to 194 eggs for each hen, and the production of milk from 4,468 to 5,954 lb. a year.

But behind these astounding figures lies an epic chapter of combined progress in animal husbandry, genetics, veterinary science, animal nutrition and livestock management. On this complex pattern of change and economic progress, I can only sketch a few of the salient points. While the average rate of feed conversion has changed little for all livestock over the last 30 years, the estimated national average feed consumption for a pound of broiler produced has decreased from 4.2 to 3.0 lb.

Conversion Triumph

In experiments, broilers have been produced at a conversion ratio of 2 lb of feed for each pound of broiler, but large scale production today is already operating with ratios of 2.5-2.7 to 1. Today, for the country as a whole, broiler chickens use, for each 100 lb. meat and fat excluding bones, only an average of 674 feed units as compared with 819 for hogs, 885 for turkeys, and 2,186 for cattle and calves. For a pound of animal protein produced, broilers consume 34 feed units, turkeys 44 units, hogs 95 units, and calves 138 units. These feed requirements of broilers and turkeys are extremely low, and represent a great triumph in the technology of cereal conversion.

The result is that broiler, chicken and turkey meat costs less today than they did 20 years ago despite the general price rise of all other food and of feed. In May, 1957 the retail price of eviscerated, ready-to-cook broiler-chicken is down to 48¢ a pound. In 1933, the now flourishing broiler-chicken industry did not exist. This year's production is estimated at 1.35 billion birds. Together with 410 million slaughtered farm chickens, this means 4.3 billion pounds of eviscerated chicken meat, or 24.7 lb. of chicken meat for each civilian consumer annually.

The production of turkeys has increased from 176 million lb. of eviscerated meat in 1929 to 1 billion pounds this year, or 6 lb. for each person. It appears that of the proportion of all concentrates fed to livestock, that fed to poultry will exceed 25%.

Broilers Good Example

Since this poultry-meat industry is the most progressive element in the entire grain economy, and its impact on agricultural income and the food economy is greater than is apparent, I should like to survey briefly the key features of this biological business of converting cereals into the finest animal proteins.

This industry consists of an extremely well-coordinated system of at least 10 different specialized types of enterprises. The performance of each of them, plus additional services by others, are prerequisites for the success of broiler production.

The enterprises to which I refer are the following:

1. Breeders of purebred strains of various types of meat chickens to be used as hens and as cocks for fertilized hybrid eggs.
2. Producers of hybrid brooding eggs.
3. Incubators who buy brooding eggs and sell baby chicks to broiler producers as well as to turkey producers and egg producers. They produce and sell baby chicks on order for broiler producers, vaccinate and "sex" the chicks.
4. Feed mills and mixing plants which produce formula feeds with vitamins, minerals, guaranteed protein content, antibiotics and other medications.
5. Research stations which develop new formulae, study nutrition and veterinary-medicine problems concerning chickens and constantly test the output of the feed mills.
6. Feed dealers who supply the broiler producers.
7. Broiler producers, usually with capacities of from 10,000 to 40,000 broilers per man and a fourfold output per year with a 10 to 11 week production cycle.
8. Poultry slaughterers and processors with sufficient capacity to absorb the output of the producers.
9. Poultry-meat wholesalers.
10. Poultry-meat retailers.

This industry needs the services of

TRUCK-TRAIN CRASH WRECKS ELEVATOR

DIMMITT, TEXAS—A collision between a freight train and a butane truck caused the destruction of a grain elevator and did an estimated $250,000 damage here.

The truck was overturned and the escaping gas ignited to set fire to the 55,000 bu. capacity elevator of the Castro County Grain Co. Flames also destroyed an office building and scales at the neighboring Kearns Elevator and severely damaged four box cars loaded with 2,000 bu. of grain each.

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Dale Walker

TERRITORY MANAGER—Hubbard Milling Co., Mankato, Minn., has appointed Dale Walker territory manager in west-central Minnesota, Ogden P. Confer, vice president, announces. For the past several years Mr. Walker has been with the Golden Sun Milling Co., Estherville, Iowa. Earlier, he had operated a feed and produce store in Graettinger, Iowa, and had been a hatchery manager for Hy-Line Poultry Farms, Spencer, Iowa.

rapid, long-distance refrigerator truckers as well as the products of the pharmaceutical industry.

The heart of the whole broiler industry is the feed mills, which move the vast amounts of mixed cereal feeds to the broiler-producer plants.

It is a new industry which produces in 10 weeks from birth to slaughter 3½ lb. meat birds—1.3 billion of them in one year.

Cereal Future

The cereal economy participates to the fullest extent in the rapid technological progress that is responsible for the rising wealth of this country. The cereal economy will become increasingly identical with the livestock-feed industry for which it supplies about half the feed requirements. The grain economy suffers from excess capacity of our farms to produce and from exorbitant surpluses in public granaries that are a nuisance to us and other countries. They have been created chiefly by price-support measures which cause the lag in their disappearance into consumption. The surplus situation is already approaching the markets for livestock products, particularly, at the moment, the broiler market.

Chemistry has a vast area for further experimentation with and improvement in the conversion efficiency in the hog and cattle industries. The broiler industry has shown the way.

Cotton Gin Trash in Cattle Ration Tested

COLLEGE STATION, TEXAS—Texas A&M College Station researchers reported recently on a test in which cotton gin trash was worth about 90% as much as cottonseed hulls in steer fattening rations.

Steers fed a roughage mixture of equal parts of cottonseed hulls and ground alfalfa hay made more gain than those fed a like mixture of ground cotton gin trash and ground alfalfa hay in an experiment at the El Paso Valley Experiment Station.

The mixture of hulls and hay was more palatable and easier to feed. Despite such advantages for cottonseed hulls, gin trash may be used as a portion of the roughage ration and at a financial advantage if lower in cost than cottonseed hulls, the researchers said.

Light Grain & Milling President Retires

LIBERAL, KANSAS—Ira A. Salley retired as president of Light Grain & Milling Co., Inc., of Liberal, after 41 years with the firm.

Charles M. Light, Jr., was named president of the company at a meeting of the board of directors to succeed Mr. Salley.

It was also disclosed that the Light family has purchased Mr. Salley's stock in the business.

Mr. Salley's association with the firm dates back to 1916 when he joined C. M. Light a year after the latter founded the mill and elevator.

Other officers elected for the corporation are: W. E. Bush, vice president and secretary; George A. Light, treasurer; Caryl Light, new board member to fill Mr. Salley's position; and Paul W. Light, director.

The firm will continue to handle grain, flour milling and feed manufacturing, Mr. Light said. Plans for additional storage facilities are under consideration, and the company will make every effort to expand its operations when expansion is justified by business conditions, Mr. Light said.

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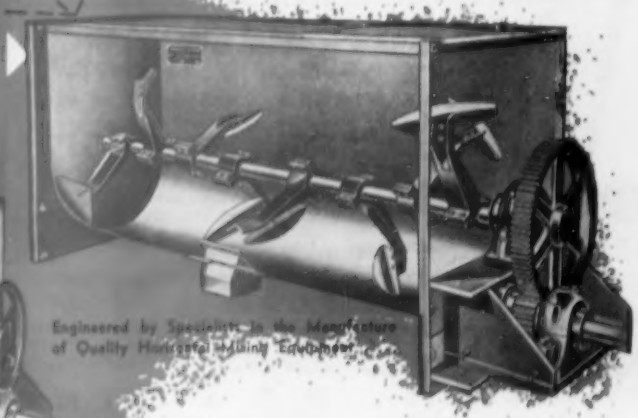

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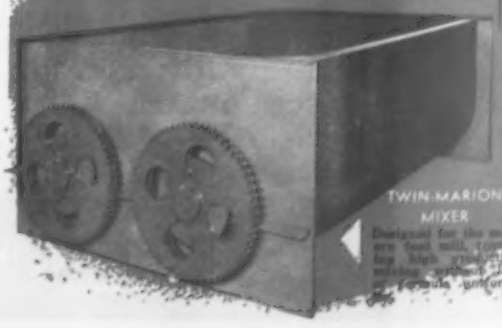

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EFFECT OF INTEGRATION

(Continued from page 22)

one source and confining the layers, a uniform yolk color can be maintained. By requiring all producers to have refrigeration, egg quality can be maintained. And finally, by using a limited number of breeds, strains, or crosses the disposal of the fowl may be facilitated.

Uniform Production Practices: Requiring all producers to use a certain bird, feed, housing and equipment, enables the integration to do a much better job in pin-pointing problems in management. By close supervision, a service man can do much towards helping a producer match the records set by more skilled managers. The producer does not have the excuse that "his house is different," "my neighbor is using a better feed," or "his chicks are better."

Lower Chick and Feed Costs: An integration should be able to buy (or produce) chicks at a somewhat lower cost than an independent producer. Buying several hundred thousand chicks a year gives the integration considerable bargaining power. By producing its own feed and hauling directly to the producer, a number of costs are theoretically reduced.

Reduced Marketing Problems: Inasmuch as a producer does not have to market his eggs, this problem is shifted to the integration. By using egg coolers at the farm and cooling devices throughout the operation, it should be possible to maintain eggs at a high quality. Also, by tying the integration in with a marketing agency, a number of distribution costs can be reduced.

Superior Mangement: By careful selection and culling, an integration should be able to have producers that would tend to be above average. It is assumed that the integration will be large enough to hire a skilled service man to work directly with the producers.

Less Capital Problems: This may be more of a paper advantage than an actual one. In setting up an integration, capital problems may be very great. Also, the fact that the integration more or less assumes most cash expenses until the birds begin laying does not differ greatly from what is available to an independent producer under today's conditions.

The foregoing more or less points out the principal advantages of integrating an egg operation. The fact that a number of such operations have failed and that few are in actual operation today indicates that a number of disadvantages exist.

The principal disadvantages are: (1) capital investment necessary, (2) slow turnover of capital, (3) disease hazards, (4) difficulty maintaining a fixed price or return, (5) competition, (6) difficulty holding growers and (7) loss of producer independence.

Capital Investment Necessary: In the Kansas cage plan, the cost to the producer runs around $11,000 (of which at least $3,000 must be his own money). In addition to this, someone must finance the pullets until they begin to lay. This will cost about $2 per pullet housed. Then there is the cost of operating pick up trucks, providing services, processing the eggs and delivering to retail stores. To produce 2,500 cases of eggs per week during peak production would require an investment of around $1.5 million. Of course, in areas where housing costs run less, the capital investment would be less.

Slow Capital Turnover: The production cycle for a layer begins at one day of age and continues until the bird is 20-24 months of age. A return on capital invested does not start until the bird is 6-8 months of age, and no profit is made until the bird is 12-18 months of age (and perhaps longer). The year to 18 months required for capital turnover can be contrasted to the 9-11 weeks required for broilers.

Disease Hazard: The occurrence of disease in a laying flock (or in a group of replacement pullets) is a far greater hazard than in the case of broilers. Normally, if a disease outbreak occurs in broilers, it can be cleaned up and the birds marketed. However, in the case of laying birds, a disease outbreak may be controlled, but the reproductive performance is normally damaged and the birds may not be profitable. If a disease outbreak occurs early in the laying period, the producer may have to sell off his flock as meat at a great loss.

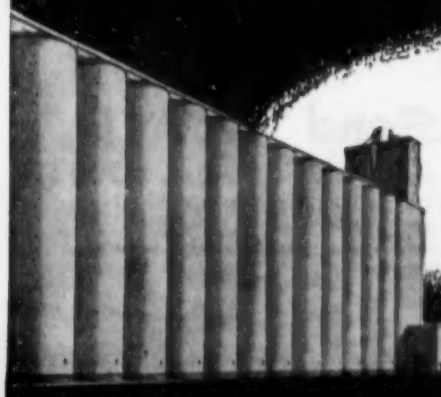
Marketing Problems: Although it has been stated that an integration reduces marketing problems, it does not overcome them all. For example, the ability to market the producer's eggs at a premium may be impossible over time. Guaranteeing producers a fixed price may be difficult in the face of very low egg prices. The Kansas cage plan, for example, guaranteed 37¢ doz. on all large eggs.

Competition: Any integrated operation that is successful will face considerable competition in its attempts to hold its producers. Some plans are set up on a contract basis with penalties for producers who fail to keep their part of the agreement. However, any integration that resorts to the law to back up full compliance will find producers shying away from joining up. This has been the experience of broiler integrations. What develops is a "no-contract" set-up where the integration and producer are tied to each other through a mutually beneficial arrangement.

Types of Plans

The Kansas Cage Plan: In this plan a producer builds a house to specifications provided by General Mills. The

OUR "FORMULA"... for serving the formula feed mixers



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total cost is about $11,000 for a house holding 1,680 birds in cages. The house is financed over a 36-month period. Part of the money comes from the Federal Housing Administration or from local banks. The rest comes from General Mills and the equipment companies.

The producers are guaranteed a minimum of 37¢ doz. for all grade A large eggs or 2¢ a doz. over the Kansas City, Missouri price, whichever is larger. The egg checks are mailed to General Mills or the local bank. All the birds used are hybrids secured from the local General Mills dealers at $1.75 each at 16 weeks of age. Each day over this age the cost is 1¢ per bird more (a 20 week-old pullet would cost $2.03).

Bulk bins are placed on some farms and an egg cooler is used to hold eggs until they are picked up (at least twice weekly). The eggs are marketed by Hurst Foods, Inc., in local areas. The contract with producers is for a period of three years. It cannot be broken without due cause. At the end of three years it is continued unless there is a written notice of termination at least 60 days before the end of the three-year period.

Tennessee Egg Company: In this plan the Tennessee Egg Co. supplies a minimum of 4,000 day-old sexed pullets. All feed is delivered to the laying house. Egg cases, vaccines are furnished by the company while the producer supplies housing, equipment, litter and labor.

The producer gathers eggs three to five times daily and holds the eggs in an egg room. The Tennessee Egg Co. picks up eggs twice weekly. The payment is 6¢ per dozen plus bonuses as follows: 2¢ if mortality is less than 15%; another 2¢ if less than 4.5 lb. of feed are required to produce a dozen eggs; and an additional 2¢ per dozen if the production on a hen housed basis is 240 eggs or more. The growers have been receiving an average of 10½¢ per dozen.

What the Future Holds

Integration has worked on a limited scale, but to date there are no successful large scale operations. The low egg prices prevailing the past 12 months have placed several integrated operations in serious positions. In one instance in Texas, an integrated operation was taken over by the producers and is now operating as a cooperative.

Integration might be made to work in certain areas, providing the economic situation is favorable when it starts. For example, in surplus producing areas where the mechanism is already setup to supply chicks and feed to growers and where marketing agencies are established, an integration might pull together many growers and blend them into a successful operation. It might also work in deficit egg consuming areas where there is a desperate need for an enterprise.

Much of what an integration offers already exists, although perhaps not in a fully organized way. For example, most producers today have their feed and sometimes chicks furnished them on open account until they can be paid for. They are not, however, guaranteed a certain price for their eggs. It is this phase which makes the integration completely different. If the guarantees promised can be fulfilled (and are high enough to be attractive to producers), we will see more integrations in the future.

The plans of the future are more likely to follow the Tennessee Egg Co. program than the General Mills program. There is a lot of interest in these plans, and they may yet revolutionize our egg business.

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Florida Station Studies Palatability of Pig Feeds with Antibiotics

GAINESVILLE, FLA. — Researchers at the University of Florida Agricultural Experiment Station reported recently on a study of the palatability of pig rations containing various antibiotics.

The tests were conducted by D. C. Tomlin and Dr. H. D. Wallace and Dr. G. E. Combs, Jr., of the animal husbandry and nutrition department.

They said that in this test pigs had a "definite preference" for chlortetracycline and that feed consumption was "definitely reduced" when crystalline erythromycin was fed to weanling pigs, even at levels as low as 2 milligrams per pound of ration.

The pigs were fed a basal ration consisting of ground yellow corn, soybean oil meal, vitamin premix, steamed bone meal, ground limestone, matter whether much or little had been eaten.

"The pigs showed a definite preference for feed containing chlortetracycline and a decided dislike for that containing erythromycin," a university news report said. "Oxytetracycline and penicillin V seemed to exert little influence either way."

As yet, the researchers said, no explanation can be offered for one antibiotic being preferred and another rejected in this experiment.

The researchers said they believe that "it would be well for feed manuiodized salt and trace mineral premix.

Five feeders containing the ration were set up where the pigs could have access to them and were shifted in position at the end of each week. One feeder contained feed with no added antibiotic and four others contained feed with 40 grams of chlortetracycline, oxytetracycline, penicillin V or erythromycin per ton. Feed was kept fresh in the feeders, no facturers to consider palatability when formulating swine rations containing antibiotics."

California Company Names Gene Thomas

SAN MATEO, CAL.—Gene Thomas is managing partner of the California Mill Equipment Co., manufacturers' representative founded recently at 643 Cuesta Way, San Mateo, Cal.

Mr. Thomas was formerly with the Walter N. Steele Co., San Francisco, which was dissolved following the death last year of Mr. Steele.

The new firm represents the Hart-Carter Co., Jackson Machine Works and the Dave Fischbein Co., all of Minneapolis; Hayes & Stolz Industrial Mfg. Co., Ft. Worth, and the Seedburo Equipment Co., Chicago.

California Mill services northern California and for some companies covers all of California, Arizona and Nevada.

John R. Bott

WINS SALES CONTEST—John R. Bott, San Antonio, Texas, territory manager for Philip R. Park, Inc., won first place in the firm's sales contest during the most recent sales period. Second place winner was Robert Lutz, Porterville, Cal. Philip R. Park, Inc., is manufacturer of ManAmar feed supplements. The sales period covered the last four months of 1956 and the first two of 1957.

Ralston Purina Will Build Elevator At New Plant

ST. LOUIS — A 500,000-bu. grain elevator along with marine unloading and loading facilities will be added to the new Ralston Purina Co. mill at Guntersville, Ala., it has been announced at Purina headquarters in St. Louis by Raymond E. Rowland, president.

Purina's Guntersville mill was formally opened on June 1. It is located on Gunters Lake. The marine facilities will allow the unloading of 10,000 bu. grain an hour from barges. They will also provide means of loading products onto barges.

The elevator will be built of reinforced concrete. Construction work will start in the immediate future. The mill is now in production.

FEED STORE CHARTERED

SHREVEPORT, LA.—Mecum Feed & Supply Corp. here has been granted a charter by the state of Louisiana for a feed and supplies business. Authorized capitalization is $2,000.

Pheno-Mineral mixes—for worm control.
PHENOMIN
Trade-Mark Reg. U.S. Pat. Off. No. 643,493
The new Phenothiazine Wormer for Cattle and Sheep. Cattle and calves should receive two therapeutic doses of Phenothiazine a year, and should be fed low-level Pheno-Mineral mixes continuously (except milking dairy cows).

NOW! TWO SPECIALIZED HARDY *Trace-Mineral* SALTS

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FORMULATED ESPECIALLY FOR SWINE

HARDY *Super-Trace* SWINE SALT WITH EXTRA ZINC FOR PARAKERATOSIS CONTROL

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Pioneer Bag Company Expands in Kansas City

LARGE BAG PLANT ADDED TO SUPPLEMENT SERVICES TO CUSTOMERS

We are proud to announce the acquisition of the bag plant in Kansas City, Kansas, of the Fulton Bag and Cotton Mills.

Our purpose in taking over these added facilities was to increase the present facilities of Pioneer to the point that every bag service will now be available to our customers. Also, we have added greater productive capacity, which will speed your orders to you.

Many of the former Fulton employees are being re-employed by Pioneer. Thus, the skill and productive know-how of the splendid Fulton organization will supplement that of the Pioneer organization.

Quality Bags are made by skilled people. Pioneer employees have long records of continuous employment at Pioneer: and such also is the case with the Fulton people. We are proud to have them come into the growing Pioneer family of skilled bag makers.

Fulton customers are assured of a continuation of every Fulton service and the high standards of quality for which Fulton has always stood. Pioneer customers are assured of broader services.

PIONEER NOW OFFERS YOU ALL THESE COMPLETE BAG SERVICES

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Paper Bags of all kinds are manufactured and printed by our Allied Paper Bag Corp. plant in North Kansas City, Mo. This modern plant turns out Multiwalls with speed and efficiency. 4 color printing of the best quality.

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Burlap and Cotton bags of every description, expertly printed, with rapid delivery by our own trucks anywhere in the Mid-west. Our production schedules can always be adjusted to meet your emergency requirements.

• USED Bags: Paper, Burlap, Cotton:
All Pioneer used bags are carefully inspected, repaired, vacuum cleaned and fumigated. You can have every confidence in Pioneer Processed Used Bags, available from the Used Bag Division of Pioneer in North Kansas City, Mo.

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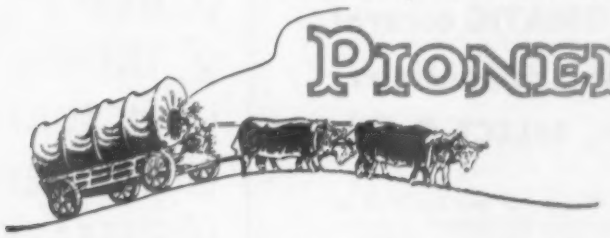

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FULTON CUSTOMERS IN KANSAS CITY REGION:

We have acquired all the plant equipment, **printing plates** and sales records with the Kansas City Fulton plant. You can expect the same fine service from this plant under Pioneer management, as always. If you have any questions, just telephone Mrs. Helen Reynolds collect, as she is our new customer relations expediter, after 29 years of service with Fulton. Most other employees will be with us also.

Business Management To Be Poultry Topic

ATHENS, GA.—A staff of top experts on poultry business problems will be on hand for the second session of the Southeastern School of Management at the University of Georgia here the week of July 28.

Authorities such as Randolph Thrower, specialist on corporation income taxes; Harry N. Crawford, advertising executive with wide experience in poultry advertising and Dean James E. Gates of the University of Georgia School of Business Administration, specialist on "brainstorming" techniques for new ideas, will assist in the training course for poultry industry executives.

Advanced instruction in administrative practices and business policy will be given under the direction of Dr. Howard R. Smith and Robert R. Dince, Jr., staff members of the University College of Administration. Workshop periods for discussion of individual problems of "students" will be taken up for two hours daily, just as was done at the first of the three week-long sessions, in March. Final session in the course will be held here during the week of Oct. 27.

Twenty-two "students" from 11 states are enrolled for the school, according to Harold Ford, director of organization for the Southeastern Poultry & Egg Assn., which is sponsoring the course in cooperation with the university.

No new applicants are being accepted for the current school but a similar course is planned for next year, possibly beginning in March. Applications for the 1958 school schould be directed to Mr. Ford at 307 Forrest Blvd., Decatur, Ga.

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Soybean Research May Give Two Extra Crops

URBANA, ILL. — Artificial light and heat may be helpful in producing an extra two generations of soybeans in greenhouses at the University of Illinois this winter.

Speeded-up development of disease-resistant soybean varieties and improvement of other soybean strains already existent could be the result if this technique is successful, says Richard Barnard, plant breeder with the U.S. Regional Soybean Laboratory at Urbana.

Fluorescent lights are used in the greenhouses in winter to prevent the shorter days from maturing plants too soon. This would happen to the soybeans as well. The additional lights supply light for about 14 hours daily in the greenhouses.

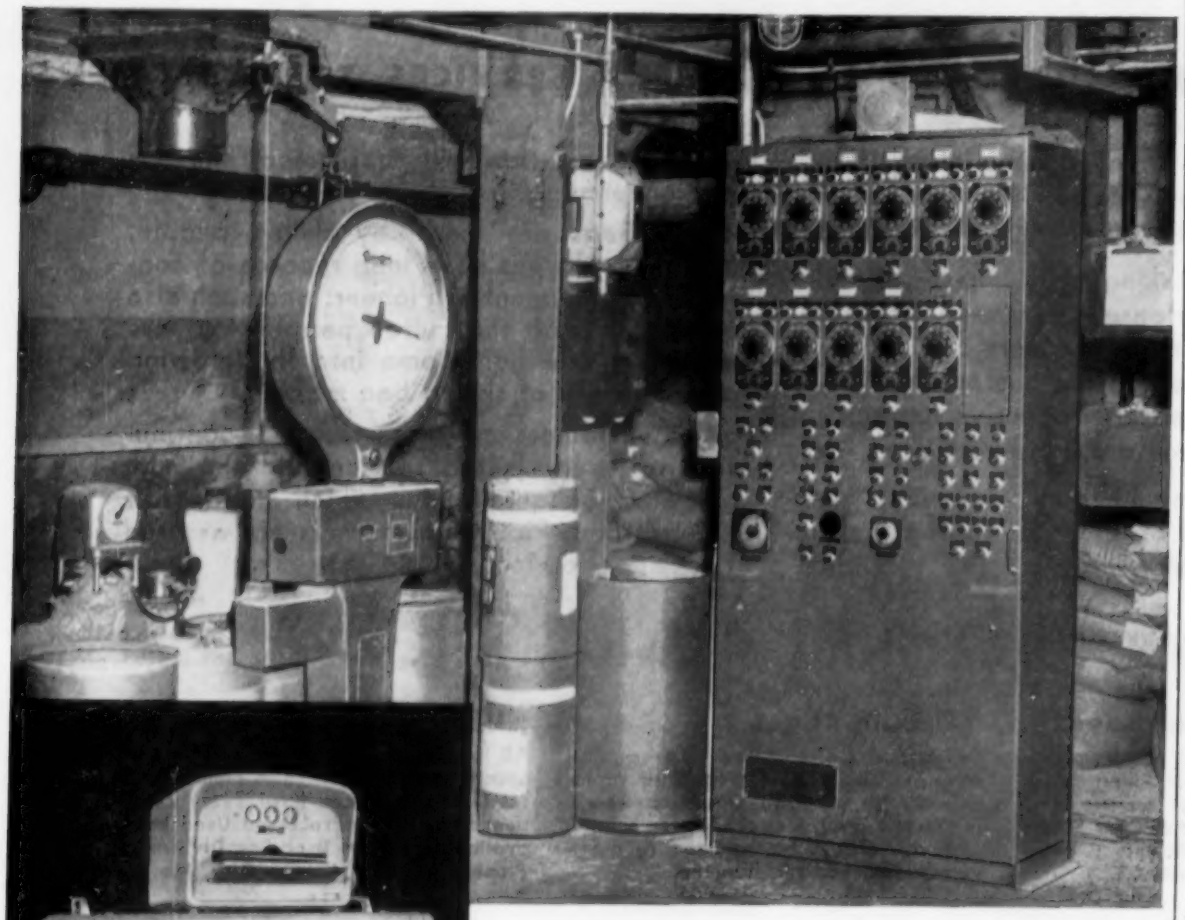
Although the low intensity of fluorescent lights causes the greenhouse crop of soybeans to grow tall and spindly, this isn't expected to have any effects on the succeeding generations grown normally in the field. The plants will then become normal in size again.

J. S. Williams

APFM SPEAKER—**J. S. Williams, former national sales manager for Ken-L-Ration, and later national sales manager for Puss 'N Boots, will be the luncheon speaker Sept. 12 at the convention of American Pet Food Manufacturers in Chicago. He was chairman of the former dog food division, predecessor of APFM, for several years.**

NEW TURKEY PLANT

ABILENE, KANSAS — Naturich Milling Co., Abilene, has announced plans for a new turkey processing plant to be located at Newton, Kansas. It will operate under the trade name Napco, the firm's turkey feed and processing division. Using automatic equipment and assembly line methods, the $50,000 plant will be capable of producing 40,000 lb. turkey daily. From 40 to 100 persons will be employed on a seasonal basis.



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- Reduces cost per ton of feed.
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FEEDSTUFFS

New England Specialist Suggests Poultrymen Raise Own Grain

AMHERST, MASS.—The possibility of more Massachusetts poultrymen's raising grain for use with concentrates has been suggested by John W. Hough, poultry specialist at the University of Massachusetts.

Writing in a poultry department publication, Mr. Hough said: "The opportunities may be limited for many poultrymen to cut their feed bill by growing corn and having it mixed with concentrates. However, we know of enough who are doing it to realize the merit wherever it may be possible.

"No doubt, some of my feed industry friends will be shocked at these suggestions. But if I were a feed man, I'd rather sell poultry concentrates to a poultryman than see another set of empty buildings when I drove by a customer of the past."

Mr. Hough made his comments and suggestions in writing about the problem of a poultryman with 2,500 layers who is trying to improve his income. A man with 2,500 layers and a wholesale market, he said, may recognize the need to increase his flock size, but the financial arrangements necessary are "hopeless." However, said Mr. Hough, this poultryman may have another alternative that he has overlooked.

Counting the feed he uses for replacements and layers, he spent about $13,000 for feed last year.

"It is a figure large enough to deserve more careful consideration than wondering how it was ever paid (or will be paid)," said Mr. Hough.

"If this poultryman has a fairly large acreage (20 acres or more) of cultivable land available, it might be a good idea for him to start thinking about plans for next year. It might also be a good idea to call the county agent and ask for help in making efficient use of this land by growing corn for grain.

"A poultryman who thinks of such a move has a lot of questions to be answered plus some pencil pushing to do. He must field out about average yields, cost of hiring work done versus purchase of second hand equipment, cost and amount of seed, best varieties and perhaps the use of neighboring fields.

"He should find out about nearby grinding and mixing facilities, the use of poultry concentrates and their cost. How about the use of the manure that is a waste product on so many farms today? What about the nearest corn picker and how would the shelling be done? These are only a few of the questions that should be answered.

Try Pears for Pork On Oregon Farm

MEDFORD, ORE.—Cull pears are helping produce pork for C. C. Hoover and his two sons, Bud and Claude, hog raisers in this pear-producing district. The experiment may result in another outlet for this culled fruit.

The Hoovers already have marketed 100 head fed out on dried, cull pears, pasture and a pelleted protein supplement. Another 600 are being fed the ration now, and they hope to feed as many as 1,000 head. The experiment is still underway to determine the profit aspects of the venture.

BEACON SCHOOL—The annual poultry feed sales-service school of the Beacon Milling Co., Inc., division of Spencer Kellogg & Sons, Inc., was held recently for the Cayuga, N. Y., firm's newer salesmen. Instruction included feed nutrition and poultry management topics. The students in attendance, and other company representatives, are shown here. Front: Julian Wright, Cayuga; Edward Craig, Massachusetts; Robert Miller, Cayuga; Warren Ritchie, Virginia; Jack Kanas, Long Island; Everett Lewis, Maryland; and Walter Foster, Maine. Second row: George Allhusen, Cayuga; J. Marshall Hunter, retired; F. S. Kennedy, Cayuga; Oscar Trask, Maine; Dennis O'Brien, New Jersey; and Ralph Snyder, Pennsylvania. Rear row: Myron Center, New York; Carroll Caffrey, Cayuga; William Mulligan, Delaware; Stanley Tyler, Cayuga; Hugh Hughes, Cayuga; and William Stutzbach, Pennsylvania.

America's Finest AUTOMATIC POULTRY FOUNTAIN

This group of Little Giant Fountains will provide water to poultry of any age from the tiniest chick to ranging turkeys. Outlasts . . . outperforms all others. Works equally as well with gravity or pressure systems. Won't rust, corrode or deteriorate. Priced to sell . . . Sales resistance is practically eliminated in these cost conscious days. Your customers will find the price of any Little Giant unit soothing to the most economy minded pocketbook.

LITTLE GIANT REGULAR No. 2500 For average flocks $4.95
BABY CHICK FOUNTAIN No. 2525 Special shallow bowl $4.95
KING SIZE FOUNTAIN No. 2550 Waters large flocks $8.95

DEALERS ARE MAKING MORE SALES . . . MORE PROFIT . . . MORE SATISFIED CUSTOMERS

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Agri-Tech chose...

COLUMBIAN BOLTED STEEL TANKS

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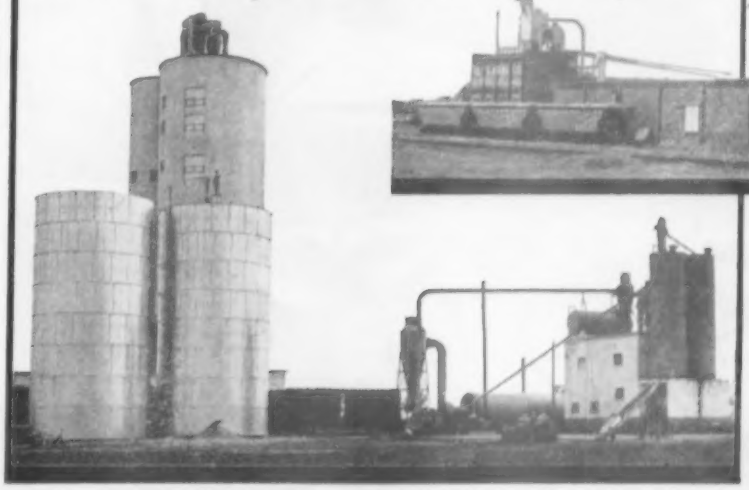


New Alfalfa Pellet and Bulk Feed plant of ALFA-MEAL CO., Columbus, Nebraska, with 4 Columbian 32' x 48' Bolted Steel Tanks around Columbian Bulk Feed Bin (not shown). The plant was designed by Agri-Tech Machinery Division. Tanks were erected by Floyd Clouse, Benkelman, Neb.

Desert Gold Feed Co., Liberty, Mo., combines an Alfalfa dehydrating and pelleting plant with its custom feed mill. This brand new plant, designed by Agri-Tech, Inc., features two gas-tight Columbian Bolted Steel storage tanks, each 32' x 64'. The tanks were erected by Floyd Clouse, Benkelman, Neb.

THE TWO VERY SIMILAR, ultra-modern alfalfa pellet plants pictured here were designed and built by AGRI-TECH, Inc. Machinery Division in collaboration with Columbian engineers.

Agri-Tech specified Columbian tanks for these jobs. The proved tightness and quality of Columbian steel products, and the cooperation of Columbian "Look Ahead" engineering, were important reasons.

Both plants . . .

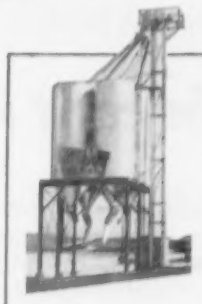
. . . dehydrate alfalfa and store the pellets under inert gas pressure in gas-tight Columbian bolted steel tanks to preserve the vitamin content for extended periods.

. . . feature pneumatic loading and unloading, the fastest, cleanest, lowest-cost way to transfer alfalfa or grains and other feed ingredients.

. . . sell to the feed industry and use Columbian bulk feed bins for blending and holding bulk feeds.

. . . were planned to give plant owners maximum operating economy and efficiency with low capital investment.

Built tighter, stronger and fire-safe, precision-made Columbian Bolted Steel Tanks are the accepted choice throughout America and in many foreign nations for new elevators and for expansion and modernization.



Columbian Bulk Feed tanks like these are ideal for interim storage and rapid loading and unloading at a rail siding and truck drive. The four tanks shown are operated by Victor Mills, Omaha, Nebraska.

For on the farm storage or for dealers who wish to secure and hold large feed accounts, Columbian Bulk Feed tanks like these are made in capacities from 2.6 tons to 7.1 tons. Basic units of 2.6 tons capacity can be readily increased in capacity with additional rings up to 7.1 tons. Larger sizes of welded construction are available. They can be mounted at ground level or overhead.

Let COLUMBIAN ENGINEERS apply "Look Ahead" planning to your grain storage and bulk feed handling problems. Write for helpful new, illustrated elevator catalog. It's FREE.

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A dry, cooked, ready to eat food for all pets—**flaked for finer flavor**— the rich meat taste goes clear through! Ryde's dog food is amply fortified with vitamins and minerals essential to health, growth and vitality. Served right from the bag!

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BROILER FIELD TRIAL COMPLETED

(Continued from page 16)

is of interest, however, that even during this period, the average fat level consumed was 9.3% of the total feed, a level which is appreciably higher than is normally fed.

Pigmentation

In addition to collecting the data shown in the table, a sample of broilers was dressed to observe pigmentation and a small number were cooked from each of the various fat levels fed. There was little difference in pigmentation obtained with the birds fed either the low or medium fat rations, but those receiving the high fat rations were not as well pigmented. As far as dressing percentage is concerned, there was no difference between the low and medium fat series while the high fat series had 4% less dressing loss. Although a taste panel was not used, no apparent consistent effect could be noted in tasting the cooked birds as a result of fat level in the diet.

It is obvious that a feed containing 18% fat is not practical for present handling methods used in the feed industry. The starter ration containing the high level of fat (20.5% total fat) was extremely difficult to use in self-feeders and required stirring, particularly during the early period of growth in order to have it accessible to the chicks. However, the starter ration containing 10% added fat was excellent in texture and is considered practical. Whether or not 10% of other fats would give the same texture would have to be determined. It is indeed of interest, however, that despite the physical handling difficulties of the high fat feeds, the cost per pound of broiler produced was less as the fat level was increased.

This trial represents the fifth field test involving 10, 12 or 15% added fat in broiler rations where comparable results have been obtained. Obviously, the prices of corn and soybean meal and fat are very critical in determining whether or not high fat rations are economically sound. For the calculations used in determining the feed cost in this trial, $56 per ton for ground yellow corn, $66.40 per ton for 50% protein soybean meal, and $145 per ton for fat were used.

These results together with those obtained in previous tests strongly suggest that the use of fat levels up to 10% in non-pelleted starting feeds up to three weeks should be considered. Based on the prices used in these calculations, this is economically advantageous. However, if one would attempt to increase the fat level in a pelleted feed, one would lose most, if not all, of the economic advantage due to pelleting cost. Where good management can be assured so that feed waste is not likely to be great, the 10% fat ration could be used under practical conditions throughout the growing period. Where feed waste is likely, it seems desirable to consider following a high fat ration with a low fat pelleted ration after three or six weeks.

The lack of response from the addition of methionine hydroxy analogue in these feather meal-containing rations is comparable with that obtained in the previous trial using DL-methionine. It is believed that feather meal exerts a sparing effect on the requirement for methionine in some way. The explanation is not known at this time, and further studies are required to determine whether or not this is true.

"...says he can't keep a thing on his stomach!"

In a hundred experimental laboratories, the lid is being lifted off the secrets of the rumen every day. The steer or cow with a neat, covered hole in its rumen is a standard part of modern research in the nutrition of ruminant animals. The contents of the rumen can be observed, removed and analyzed with no harm or discomfort to the animal.

It is no longer true that the darkest spot in the world is the inside of a cow's stomach. Much that goes on there has been discovered, much remains to be worked out to solve such problems as bloat.

As rumen research goes on, the reasons why PROCADIAN* Urea provides an excellent source of protein are becoming more thoroughly understood. Much basic research on rumen nutrition is being underwritten by Nitrogen Division, makers of PROCADIAN Urea. For free copies of the latest information on feeding Urea to ruminants, write to Dr. D. F. Green, Nitrogen Division, Allied Chemical, 40 Rector St., New York 6, N. Y. Just send a postcard with your name, title, business address and the words "Feed Urea". *Trade-mark

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PROCADIAN* UREA FEED MIXTURE

The quick source of protein in mixed feeds

UP TO 16% MORE EGGS
even from your SLUGGISH LAYERS
NOW WITH VITAMIN "K"
New IMPROVED FORMULA HILLTOP K-M
Peps up layers who are in a slump because it improves feed conversion, increases water and feed consumption.
NEW K-M BRINGS RESULTS!

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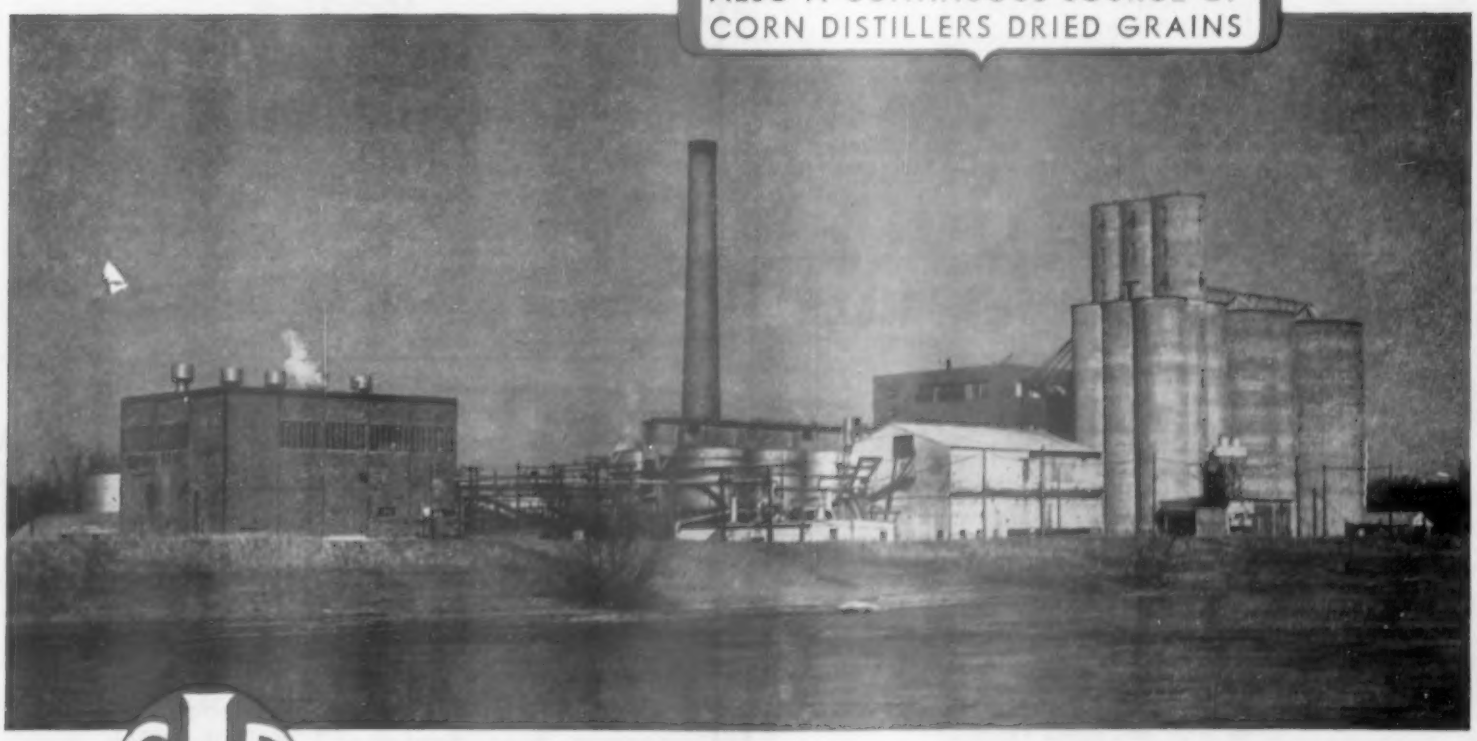
70% corn distillers solubles
30% corn distillers grains

And this is your confirmation. You *can* formulate your feeds with Solulac and be confident of a supply that's continuous. So take advantage of Solulac . . . its high nutritional values . . . its unidentified growth factors . . . its vitamins. In 50 and 100 pound bags or bulk carloads.

Write, wire or phone.

ALSO A CONTINUOUS SOURCE OF CORN DISTILLERS DRIED GRAINS



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MACHINERY FOR SALE

WHIRLAWAY AIRBLAST CAR LOADERS, cast iron pulleys, new and used feed and elevator equipment. Hagan Mill Machinery, P. O. Box 574, Jefferson City, Mo.

FOR SALE—ENCLOSED MOTORS, Richardson scales, truck scales, hammermills, oat crimpers, horizontal and upright feed mixers, sewing machines, elevator legs, screw conveyors, molasses mixers and pellet mills. J. E. Hagan Mill Machinery, Box 574, Jefferson City, Mo.

FEED MIXER, 1-TON CAPACITY, guaranteed first-class throughout. 5 H.P. motor drive. Ad No. 8774, Feedstuffs, Minneapolis 1, Minn.

CHAMPION MOBILE GRINDER AND Mixer units. Champion Portable Mill Co., 2106 Como Ave. S.E., Minneapolis 14, Minn.

LARGE STOCK OF ALL TYPES GRAIN processing machinery. E. H. Boer & Co., Inc., Baltimore 2, Md.

FOR SALE — One 1956 Tag Heppenstall moisture tester, excellent condition, will sell or trade. Write or Phone Green Camp Cooperative Elevator, Green Camp, Ohio.

TWO USED BURTON MIXERS, GOOD Condition. 1 brand new 5x6 Toledo Floor scale. Tape control. 40% off. Vitamized Feed Company, Fort Dodge, Iowa.

60 HP BIG CHIEF HAMMER MILL W/15 HP separate Fan motor, crusher, and 3 magnets. $1,100. Abe & Jensen Feed Mill, Green Isle, Minn. Phone 591.

DAFFIN MOBILE FEED MILL—THIS MAchine is in excellent condition. Financing available. Equipment priced right. Available for immediate delivery. Address Ad No. 2924, Feedstuffs, Minneapolis 1, Minn.

CHAMPION PORTABLE MILL WITH TWO ton horizontal mixer, molasses equipment. 2½ years old. New power unit. Priced to sell. Ad No. 2916, Feedstuffs, Minneapolis 1, Minn.

PORTABLE FEED MILLS PICNIC AND annual meeting. Beechwood playground Sat., Aug. 10, Alliance, Ohio. SEE NEW FORDS OUTFIT in operation. H. Myers, Rt. 3, Alliance, Ohio. Phone 7044.

DAFFIN MOBILE FEED MILL—5 YEARS old, has new G.M. Diesel installed. Entire outfit is in good working condition. D. P. Knepper, Waterfall, Pa. Phone New Grenada, 6R11.

FOR SALE — NEW FAIRBANKS-MORSE truck scale, 20-ton capacity, 24 ft. platform. This scale has been in storage for two years. Available at invoice cost, f.o.b. Eureka, Mich. J. O. Gewer, Eureka, Mich.

ONE 24" GRUENDLER HAMMER MILL with direct connected GE 125 HP Motor, 3 phase, 60 cycle, 440 volts, 1800 RPM, with 12 screens. Price $1,200. Richardson Automatic Bagger scales complete $600. St. Regis Valve bagger $400. Napoleon Alfalfa Mills, Inc., Napoleon, Ohio.

MILL MACHINERY

Largest stock new and rebuilt Flour and Feed Mill Machinery in Midwest, over 2,500 items. Roller Mills our specialty. Write us your needs.

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LOUISVILLE 8-ROLL 36" DEWATERING Press, 24,500 gal. Aluminum Tank; Hammer Mills JB No. 4 Model W-75 HP; Jeffrey 42x36"; Rotary Dryers 3'x24"; 4'6"x40', 5'6"x42', 6'x60'. Ribbon Mixers 336 and 56 cu. ft., also Steam Tube Dryers, Attrition Mill, Conveyor. Perry, 1403 N. 6th St., Philadelphia 22, Pa.

BUSINESS OPPORTUNITIES

ONE FULLY EQUIPPED WHOLESALE and retail feed and grain mill doing excellent business in feed, seed and fertilizer. Consists of 12,000 bu. bulk storage, 1½ ton vertical mixer, molasses blender, pellet mill, oat crimper, attrition mill, JB hammer mill, corn cracker and grader, 2 seed cleaners, a 40 ft. deck 30-ton truck scale, 6 trucks, R.R. siding. Splendid opportunity to take over going and profitable business in the leading dairy and poultry section of Middle Tennessee. For sale because owner suffered a heart attack and wishes to retire. Address Ad No. 2911, Feedstuffs, Minneapolis 1, Minn.

NEAT RETAIL FEED MILL

Cost equipment $69,095, Realty $54,050. $100,000 Cash or $32,000 down, $18,000 balance equipment. Lease realty $700 mo. option to buy $54,000. 12 month sales $239,841, gross profit $78,127, net $28,278. Address Ad No. 2906, Feedstuffs, Minneapolis 1, Minn.

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COUNTRY ELEVATORS
and FEED MILLS
When you want to buy or
When you want to sell
See or Write
MID-WEST BUSINESS EXCHANGE
Halbert C. Smith Plymouth, Ind.

MACHINERY WANTED

USED GRAIN DRIER—PREFER TOWER type, large capacity, can dismantle. Coleman, Inc., Northwood, Iowa.

ALL KINDS OF GOOD USED GRAIN processing machinery. E. H. Boer & Co., Inc., Baltimore 2, Md.

36" ATTRITION MILL, PREFERABLE 4-40 volt. Shore Cob Processing Co., St. Joseph, Ill.

WANTED—USED PELLET MILLS, STATE full particulars including price. Address Ad No. 2914, Feedstuffs, Minneapolis 1, Minn.

WANTED TO BUY — RICHARDSON scales, bag closing machines and other good mill, feed and elevator equipment. J. E. Hagan Mill Machinery, Jefferson City, Mo.

MACHINERY WANTED

WILL BUY USED CORN FLAKE MAchinery including rotary cooker, rotary oven, cereal drier and flaking mill. Also will buy used pellet machinery line. S. E. Mighton Co., Bedford, Ohio.

HELP WANTED

SALESMAN WANTED—MAN CALLING ON feed dealers and elevators who wishes to add $200@500 to his monthly income. Nationally advertised product. A natural repeat item. Choice territories open. Write P. O. Box 6078, Minneapolis, Minn.

RESEARCH ASSISTANT — NEED A REcent college graduate with farm background to assist in livestock research and technical service. Opportunity for advancement. Hubbard Milling Co., Mankato, Minn.

PRODUCTION SUPERVISOR—PROMINENT dog food manufacturer will hire aggressive man for dry dog food department. Broad experience making corn flakes, pellets, dry dog food and cereals helpful. State salary and enclose snapshot. S. E. Mighton Co., Bedford, Ohio.

SALES REPRESENTATIVES

Large nationally known manufacturer of animal feed additives, requires 2 sales representatives, one to cover Texas and one for Iowa.

Degree in animal husbandry, poultry, or nutrition required. Age under 45.

Send complete resume stating education, experience and salary desired to: Ad No. 2891, Feedstuffs, Minneapolis 1, Minn.

HELP WANTED

PLANT PRODUCTION MANAGER WANT-ED—Medium sized Midwest feed manufacturer with modern plant has a big sized job for a plant production manager. Good salary plus bonus. Splendid opportunity for a fine future. Your reply will be answered and will be kept strictly confidential. Address Ad No. 2919, Feedstuffs, 612 Board of Trade Bldg., Kansas City 5, Missouri.

WANTED—SALES MANAGER FOR OLD, established Feed Manufacturing Company in Southeastern Pennsylvania. Must have thorough knowledge of poultry industry; also working experience in dairy feed sales and in promotion of egg and broiler markets. If you have these qualifications and good references you stand to gain by replying at once to Ad No. 2918, Feedstuffs, Minneapolis 1, Minn.

FEED SALES SUPERVISION AND PRO-MOTION—A large nationally known midwest agricultural processing firm has an outstanding opportunity for man experienced in swine and dairy feeding. Assist sales manager in supervision of sales force and promotional activities. College degree preferred, but will consider equivalent in experience. Age 30 to 45. Salary open. Minneapolis location. Heavy travel. We invite you to submit a resume of your qualifications for prompt and confidential consideration. Address Ad No. 2923, Feedstuffs, Minneapolis 1, Minn.

New Manager Named By Canby, Ore., Firm

PORTLAND, ORE. — Albert L. Girod, long-time manager of the Buchanan-Cellers Grain Co., Canby, Ore., has resigned because of ill health. He will be succeeded by Kenneth D. Doney who, since 1946, has been assistant manager.

Mra. Girod had been manager of Buchanan-Cellers since 1946 when the firm took over the holdings of the Berg Bros. warehouse. Mr. Doney has been with the company for 17 years and has been in warehouse work for 26 years.

The Canby operation includes a feed mill, seed and grain cleaning plant, grain elevator built in 1952 and a retail store.

GRAIN MAN DIES

SILVANA, WASH.—Norman Sneevy, 61, long-time manager of the Silvana Grain Co. here, died June 6 of a heart and liver ailment. He had been manager of the firm since 1926. Many members of the feed, seed and grain industry attended funeral services for him at Everett.

WANTED
Feed Salesman with Two Heads!
One for Selling and one for Business Management

Seriously, we need several very capable sales executive business men to be located in the Northeastern states. We are an aggressive, sales minded, growing feed manufacturer. If you would like to grow with us, write a full report on background—education—experience, etc., and address ad No. 2903, Suite 3214, 551 Fifth Ave., New York 17, N.Y.

REBUILT HAMMERMILLS
FOR SALE

A. 15" Bryant with steel base, 50 HP motor & starter, 15 HP motor on separate fan, crusher & magnet .. $1,795.00
B. 23" Gruendler No. 3 Whirlbeater, steel beam base for direct drive for 60-75 HP motor $795.00
C. 15" Jaybee No. 38, belt drive with "V" sheave, magnet, 40 HP motor & starter $1,225.00
Mill Only $595.00
D. 4A Prater direct drive, 50HP motor & starter, crusher, magnet & Used Collector (48") (Two Available) $1,695.00
E. 5A Prater direct drive, 60 HP motor & starter, magnet & crusher $1,795.00
F. 2424 Heil direct drive, 23" magnet, completely overhauled $895.00

OTHER SIZES AND MAKES AVAILABLE

Note: All mills, F.O.B. Minneapolis, Minnesota, our plant. All mills with new set of hammers, three new screens.

Call, Write or Wire
JACOBSON HAMMERMILLS
1090 Tenth Avenue S.E. Minneapolis, Minnesota

SITUATIONS WANTED

MILLWRIGHT SUPT., 20 years experience in new construction and maintenance in the feed, corn, flour and elevator industries. Desires permanent position or temporary job with permanent position possibilities. Age 42, health excellent. Address Ad No. 2912, Feedstuffs, Minneapolis 1, Minn.

CHECK FEEDSTUFF WANT ADS!!

AVAILABLE

Man with many years of successful selling experience and intimate knowledge of Northeastern feed trade will provide high type representation for one or two manufacturers interested in reaching this trade. Commission or salary. Box No. 2921, Feedstuffs, 551 Fifth Avenue, New York 17, N.Y.

Riboflavin — Vitamin B-12 — GP-101, source of whey and other unidentified growth factors

FUN FOR VISITORS—A tour of the Kent Feeds plant ends in a ride on the firm's 35-passenger pleasure boat kept on hand just for the fun it provides those who tour the firm's plants and research farm. Shown above is the boat with a group of FFA boys. Below is the new Kent Feeds plant.

Kent Feeds Tour Ends with Relaxation On Firm's Riverboat

MUSCATINE, IOWA — Relaxation on a river boat is the fascinating conclusion to a visit of Kent Feeds facilities in this Mississippi River city.

But while ingredients are shipped on the river for economy of transportation, the ride in the 35-passenger, double-deck Kent riverboat is strictly for fun. It follows a tour of the main feeds plant, the Grain Processing Corp., and the Kent research farms. Persons making the tour also get pictures of their group.

Bill Shafenacker, sales manager for the firm, says the riverboat ride is a genuine treat for the visitors.

"Its fascination might be difficult to understand," he said, "but the river is a very real attraction. We are amazed and happy that so many persons return year after year."

There's more to the tour than the boat ride, however. It starts in the one-story main plant, where feeders and feed dealers are shown all the modern advances being made in the feed industry.

Following the main plant tour, guests are taken to the Grain Processing Corp., an affiliate company which makes grain neutral spirits and vitamins of feed and pharmaceutical grade. A new vitamin plant has been added recently and is of great interest to visitors.

The tour continues to the Kent research farms, where new product developments are tested and efforts are made to apply laboratory findings into practical feed lot methods.

As a climax to the tour, the visitors pile into the pleasure boat for an hour of relaxation.

Vitren of California Opens Turlock Branch

TURLOCK, CAL.—A new branch of Vitren of California, Inc., has been opened on W. Olive St., Turlock, Cal. The company produces a pre-mix for livestock and poultry feeds.

The new Turlock plant is the most northerly of the Vitren company, which maintains headquarters in Ontario, Cal. John D. Lague, Modesto, is manager of the plant, and is a field representative.

Richard D. Hendershott, assistant manager, reports that the Turlock branch also will be the wholesale distribution center of vaccines and antibiotics produced by various manufacturers. The Turlock area, Mr. Hendershott said, is an important "center of the livestock industry and poultry industry."

Robert White Resigns USDA Grain Position

PORTLAND, ORE. — Robert E. White, who has been with the U.S. Department of Agriculture's grain division since 1918, has resigned.

Mr. White, who was head of the Pacific Coast grain division, spent his entire career in the Portland office.

Mr. White was given the superior service award in May, 1952, by USDA for coordinating and directing wheat field variety surveys and assembling information regarding surveys of smutty wheat which have been of invaluable aid in combating smut blight in the Pacific Northwest.

Prior to his work in the grain division, Mr. White was associated with the Wasco Milling Co., The Dalles and, before that, he had been employed by the Waitsburg (Wash.) Farmers Union.

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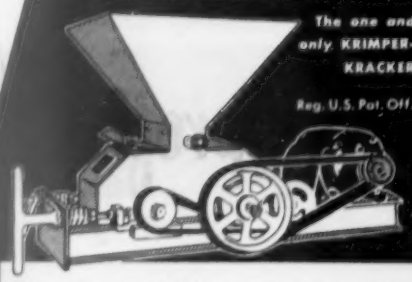

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USDA Approves New Post for Earl Butz

WASHINGTON—Dr. Earl L. Butz has the official approval of the U.S. Department of Agriculture to return to Purdue University as director of the Indiana agricultural extension service, dean of the school of agriculture and director of the agricultural experiment station.

Approval of the USDA was given the assistant Secretary by Secretary of Agriculture Ezra Taft Benson, clearing the way for Dr. Butz to take over the Purdue post Aug. 1. He succeeds Dr. Harry J. Reed, Indiana extension director since 1939, who retires July 31.

President Eisenhower named Dr. Butz assistant Secretary of Agriculture in 1954. At that time he was granted leave from his position as head of Purdue's department of agricultural economics.

Dr. Butz was born on a farm near Albion, Ind. He received a B.S. degree from Purdue in 1932. He operated the family farm for a year after his graduation, then returned to the university for further academic work. Dr. Butz became a member of Purdue's staff in 1937, and that same year was awarded a Ph.D. degree there. In 1946 he was named head of Purdue's department of agricultural economics.

The new dean and director has traveled extensively in western Europe and Asia, studying post-World War II agricultural conditions. He has carried out numerous assignments as research economist and lecturer. He also has been a contributor to numerous periodicals and publications in the agricultural field, and is author of The Production Credit System for Farmers, published by the Brookings Institution, Washington, D. C.

Charles W. Beam

JOINS ADM—Charles W. Beam has joined the Archer-Daniels-Midland Co., Minneapolis, as assistant advertising manager for formula feeds, it was announced by Gene Fowler, director of advertising and public relations. Mr. Beam, who previously handled recruitment advertising for the U.S. Air Force at Wright-Patterson Base, Ohio, is a former editor of the Nebraska Cattleman. He is a native of Stapleton, Neb., and holds a bachelor's degree in agricultural journalism from the University of Nebraska.

Eli Lilly Continues Support of 4-H Clubs

INDIANAPOLIS—Eli Lilly & Co. of Indianapolis is again supporting the national 4-H Health program. More than 700,000 boys and girls in 45 states have enrolled in the program which is conducted by the Cooperative Extension Service.

Last year the firm presented college scholarships of $300 each to six national winners who were honored at the national 4-H Club Congress in Chicago. This year the scholarship awards have been increased to $400. The company also provides individual state awards of an expense-paid trip to the Chicago 4-H Congress, and gold-filled medal awards for 4-H'ers who qualify at the county level.

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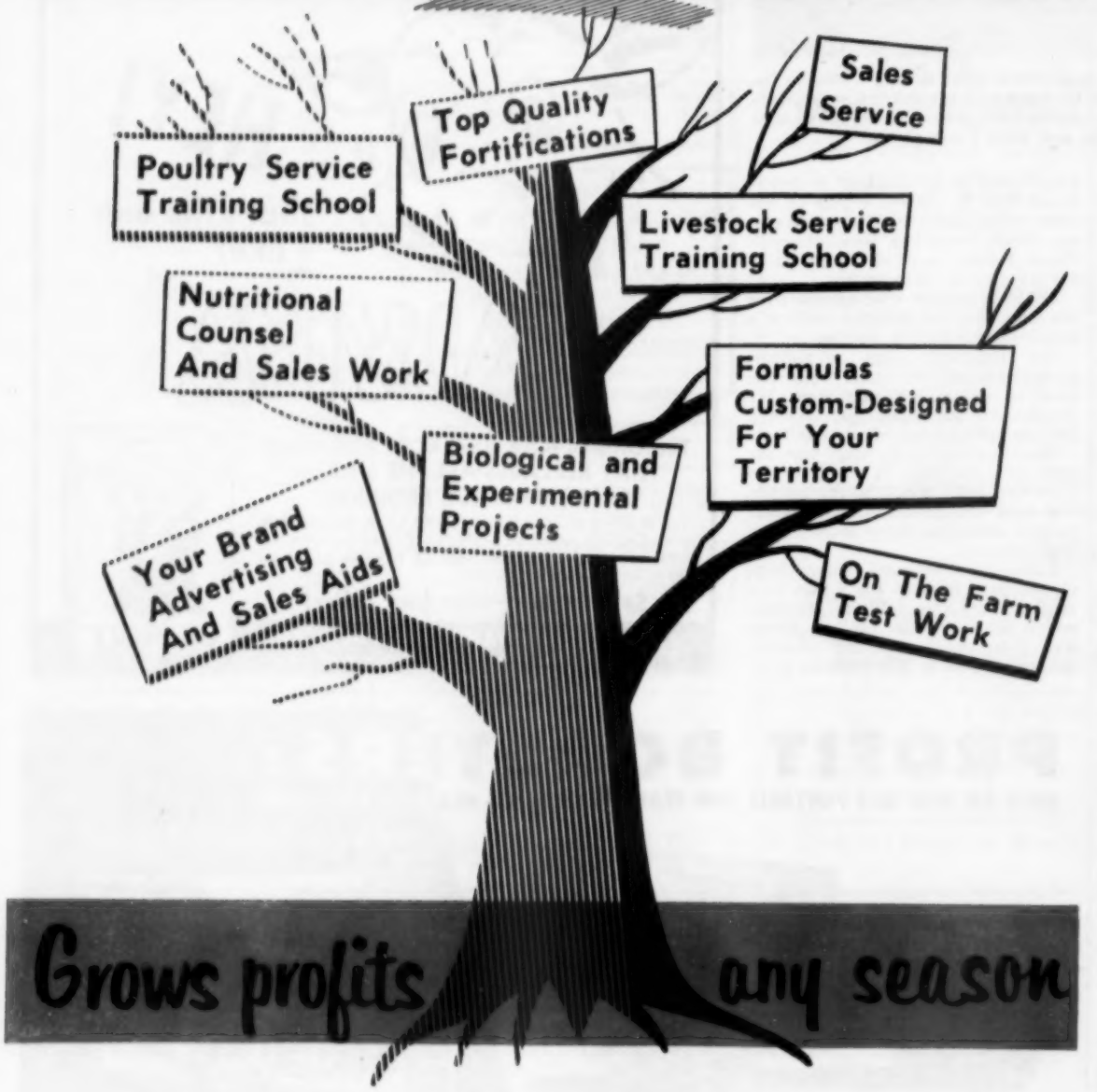
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AFMA UNIT

(Continued from page 1)

ing, the committee issued the following statement:

"This committee recommends to the entire industry serious adherence to the report of the Poultry Survey Committee from its May meeting. This report makes it clear that present production trends indicate a volume of broilers and turkeys in the months ahead that will result in supplies greater than consumer demand, and that this will precipitate prices which will not reflect a fair return to the producers.

"The feed industry is vitally interested in the well-being of the broiler, turkey and egg industries, which today are very important factors in the production of economical sources of essential foods.

"The rapid growth of the broiler and turkey industries has created a condition of over-production. To continue further rapid expansion out of reasonable proportion to consumption is unsound for all. It is recognized that economic forces and technological developments have favored these new industries, and that they brought many advantages and opportunities to countless people and areas. Many factors contributed to this expansion, which is now recognized as excessive. The feed industry acknowledges its part and is aware that immediate action should be taken by all segments of the poultry industry to stabilize production and promote practices which are sound.

"In order to bring about an adjustment of production which will minimize the danger of low broiler prices in the fall and winter months ahead, and further, to develop a broader understanding of sound principles and practices for all concerned in this vital segment of agriculture, this committee recommends the following:

Recommendations

"1. That placement of broilers be reduced from present rates.

"2. That financing of production facilities for increased poultry production be discouraged until such facilities are needed to meet an expanded consumer demand. The feed industry pledges its cooperation to the various government lending agencies to help hold requests for such loans to a minimum.

"3. That the 1953 AFMA recommendations for sound credit and finance practices be reviewed and any necessary revisions made to meet present conditions. Special emphasis should be given to further curtail credit and contracting practices which contribute to over production.

"4. That the feed industry and all other segments of the poultry industry, when considering future operations, make full use of the findings and interpretations of trends that are regularly released by the Poultry Survey Committee.

"5. That the work of this committee be on a continuing basis. That immediate steps be taken to promote among all segments of the poultry industry, production and credit practices which will contribute to an overall balance between poultry production and consumption."

NEW FEED MILL

FOUR OAKS, N. C.—Construction is under way here on a modern feed mill, the second to be started since fire destroyed the Oaks Milling Co. in April. The new $50,000 plant is being built for Canady Feed Co., a new corporation headed by R. C. Canady, Sr., as president. The other business established since the fire has been started by Roger Wilson, former general manager of the destroyed Oaks Milling Co., and Wade H. Stanley.

Toledo Exchange Receipts Decline

TOLEDO, OHIO — Both receipts and shipments of grain in the Toledo market were off in June from the previous month and from June a year ago, A. E. Schultz, secretary of the Toledo Board of Trade reports.

Receipts in June were 3,996,475 bu., as compared with 4,823,158 bu. in the previous month and 5,403,295 in June, 1956.

June grain shipments totaled 3,742,464 bu., as against 4,159,993 bu. in the previous month and 5,769,424 bu. in June, 1956.

ADDS ELEVATOR SPACE

NORTHFIELD, MINN. — A new addition to the Northfield Farmers Cooperative Elevator is to be completed in August. The new building will be 127 ft. high and will hold 110,000 bu. in its 20 bins when completed. The Olson Elevator & Mill Supply Co., Mankato, is contractor.

Dallas CSS Office Alters Reporting Policy

DALLAS—A new public reporting policy on grains sold for export on competitive bid basis is announced for the Dallas Commodity office by C. H. Mosely, director.

He said the new policy covers sales of feed grains and flaxseed. Highlighting the summarized reports, or the spot announcements from the office, will be total quantity bid on and total quantity accepted for sale as well as a breakdown on total quantity accepted at each price level within the over-all price range.

After successful bidders have been told the quantity of grain they bought, an official release will go to public and private wire services and press and trade representatives.

The information will also be typed simultaneously to CSS offices in Washington, Portland, Minneapolis, Chicago, Kansas City and New York.

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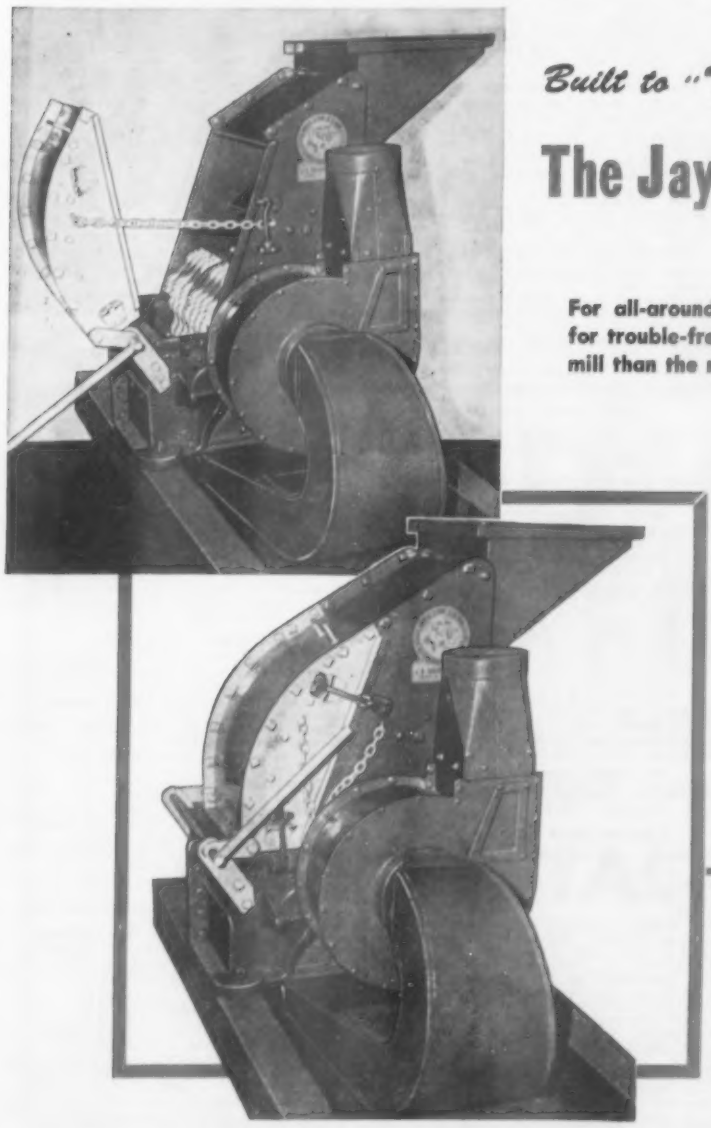

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THE FEED MARKETS

★ ★ ★ ★

Demand — Supply — Trends — Prices

Quotations on feed ingredients shown in these and adjoining columns are wholesale prices, per ton, bagged, for prompt delivery, unless otherwise noted. They are the latest quotations available from Feedstuffs correspondents and are not necessarily those in effect on date of publication. The prices represent fair average trading values and do not necessarily represent extreme low or high levels at which individual sales might have occurred. A descriptive summary of supply and demand factors prevalent in the feed market appears on page 2.

A & D FEEDING OIL

Seattle: Demand slow; trend steady; supply good; 300 D-2250 A 22¢ lb. ex-warehouse drums included; 300 D-1500 A 19¢ lb.; 300 D-750 A 17¢ lb.

Denver: Demand fair; trend unchanged; supply ample; 2,250 A, 300 D 23¢.

New York: Trend steady; price per lb. in 55-gal. drums (413 to 420 lb.): 300 ICU, 750 A 13½@15½¢, 1,500 A 15½@17¢, 2,250 A 17½@20¢, 3,000 A 19½@21¢; 600 ICU, 1,500 A 16@18¢, 2,250 A 18@19½¢, 3,000 A 20@21¼¢; f.o.b. Massachusetts, New York or Pennsylvania.

Chicago: Demand fair; supply scarce; straight A feeding oil, with 10,000 units vitamin A per gram 10@12¢ a million units of vitamin A, l.c.l., packed in 55 gal. drums, f.o.b. Chicago, drums included.

Boston: Demand fair; supply adequate; 600 D, 1,500 A 16¢ lb.; 300 D, 2,250 A 17¢; 300 D, 1,500 A 15¢; 300 D, 750 A 14¢.

Minneapolis: 10,000 A 35¢ lb.; 300 D, 2,250 A 21½¢ lb.; 300 D, 1,500 A 20½¢ lb.; 300 D, 75 A 18½¢.

ALFALFA MEAL

Ft. Worth: Demand good; trend firm; limited offerings on good quality dehydrated; offerings suncured sufficient. Recent shipments Texas dehydrated low in quality account recent drouth and hot winds. Kansas dehydrated 17% 100,000 A $50.50; Texas origin dehydrated 17% 100,000 A $43@45 f.o.b. mills; Suncured No. 1 13% protein, ¼ in. grind Texas $42@43; Colorado origin $43@44 delivered Ft. Worth truck; Nebraska origin $44 delivered Ft. Worth by rail.

Denver: Demand fair; trend steady; supply ample; 17% 100,000 A $40.

Cincinnati: Demand and supply fair; trend steady to higher; $54 sacked, Boston.

St. Louis: Demand fair; trend higher; supply adequate; dehydrated 17% 100,000 A $46.75, suncured No. 1 fine ground 13% $44.75, f.o.b. St. Louis.

Kansas City: Demand fair to good; trend steady to firm; supply limited, especially good quality material, heat wave in Midwest compounds problem as it causes rapid deterioration of quality in the tail end of second cutting and third cutting that has started. Dehydrated alfalfa meal with 17% protein and 100,000 units vitamin A guaranteed on arrival $41.50@42, sacked; 17%, 100,000 A pellets $38, bulk; suncured, slight increase in demand reported, supplies adequate. No. 1 fine ground $39. No. 1 ¼ in. $36, No. 2 ¼ in. $34, sacked.

Philadelphia: Demand dull; trend unsettled; supply fair; 17% dehydrated $55.50.

Chicago: Demand fair; supply limited; 17% dehydrated, with 100,000 units vitamin A guaranteed $45.50@46; 17% with no A guaranteed $42@43; 13% suncured $41@42.

Boston: Demand and supply steady; dehydrated 17% $53; suncured 13% $53.

Los Angeles: Demand slow; trend easier; supply ample; dehydrated alfalfa meal 17% $46, suncured 15% $41 ton sacked.

Memphis: Demand poor; trend steady; supply ample; dehydrated, 17% protein, guaranteed 100,000 units vitamin A, $46.50.

Minneapolis: Demand was fair and supplies tightened up, especially on the higher protein product; 17% dehydrated 100,000 units of vitamin A guaranteed, sacked, $44@47; 17% pellets, bulk, $41@43; granules and oil treated, bulk, $46; 18% dehydrated 125,000 units of vitamin A guaranteed, bulk, $49.

Portland: Demand slow; supply ample; trend unchanged; 15% suncured $41; dehydrated $53 f.o.b. California.

Omaha: Demand good; market stronger due to shortage of 17%; supply limited on 17%; 17% dehydrated 100,000 A, papers or burlaps $42; 17% dehydrated 100,000 A pellets $38.

ANIMAL FATS (STABILIZED

St. Paul: Demand excellent; price higher and considerable trading was done at the new level; supply tight; 8¢ lb. bleachable fancy, f.o.b. producers' plants.

Louisville: Demand easier; trend weaker; supply ample; bleachable white 7¾¢ lb.; white tallow 8¼¢ lb.; yellow grease 7¾¢ lb.; white off ¼¢; yellow off ¼¢.

Ft. Worth: Demand steady; supply sufficient; prime tallow, tank cars 8½¢; drums 9¾¢ f.o.b. north Texas packing plants with returnable drums.

Denver: Demand good; trend stronger; supply short or spotty; prime tallow 7½¢ lb.

Kansas City: Demand strong; trend steady; supply tight; 7⅜@7½¢ lb.

Chicago: Demand fair; supply short; bleachable fancy tallow, tank truck or carlots, 8¢ lb.; yellow grease 7¼¢.

San Francisco: Demand fair; supply ample; bleachable fancy 8¼¢ lb., yellow grease 7¾¢ lb.

BARLEY FEED

Seattle: Demand slow; trend easy; supply good; whole barley $53 ex-warehouse, lci, sacked; ground barley $53 ex-warehouse, lci, sacked; rolled barley $55 ex-warehouse, lci, sacked.

Ogden: Supply normal; rolled $50@54, whole barley $42@47.

Chicago: Demand dull; supply light; $40.

Baltimore: Demand dull; supply light; $50.

New Orleans: Demand dull; trend steady to lower; supply light; ground or pulverized $64@65.

San Francisco: Demand fair; supply ample; rolled $51, ground $50.

Philadelphia: Demand dull; supply fair; pulverized $45.50.

Milwaukee: Demand good; supply fair; needles 83¢@$1.05, ground $24.

Boston: Demand slow; supply light; pulverized $51.70 nominal.

Los Angeles: Demand steady; trend firmer; supply ample; standard rolled $2.93, standard ground $2.89, both cwt, sacked.

Portland: Demand slow; supply ample; trend unchanged; rolled $55, ground $53.

BENTONITE (SODIUM)

Denver: Demand fair; trend steady; supply ample; 200 mesh $12.50 f.o.b. shipping point.

Chicago: Demand very good; supply adequate; f.o.b. Wyoming and South Dakota shipping points; granular, 30 mesh $15.50; fine granular, 80-100 mesh, $12.75; powder, 200 mesh, $12.50, f.o.b. Belle Fourche, S.D., minimum 30-ton carlot; 80 granular $12.50 net; 200 mesh fine $12.25 net.

BLOOD FLOUR

Louisville: Demand better; supply fair; trend strong; $87.50@92.50.

BLOOD MEAL

Portland: Demand slow; supply ample; trend unchanged; $100.

Denver: Demand fair; trend stronger; supply ample; $85.

Ogden: Supply normal; $100 ton in 100-lb. bags f.o.b. Ogden.

San Francisco: Demand slow; supply tight; $6 per unit of ammonia.

Cincinnati: Demand good; trend steady; supply fair; $125@130.

New Orleans: Demand good; trend steady; supply adequate; $100@105.

Chicago: Demand and supply fair; $105@120 guaranteed 50% protein.

Los Angeles: Demand slow; trend steady; supply ample; $6 unit of ammonia.

Louisville: Demand improved; supply normal; trend stronger; $87.50@92.50.

BONE MEAL (STEAMED)

Portland: Demand slow; supply ample; trend unchanged; $95.

Los Angeles: Demand fair; trend unchanged; supply ample; imported $72.50@73.50 in 20-ton lots.

Chicago: Demand and supply fair; $75@85.

Denver: Demand slow; trend steady; supply ample; $70 f.o.b. West Coast.

New Orleans: Demand slow; trend steady; supply ample; $85@95.

Cincinnati: Demand good; trend steady; supply adequate; $85 ton sacked, f.o.b. Cincinnati.

San Francisco: Demand good; supply ample; $80.

Buffalo: Demand fair; trend steady; supply ample; $85.

St. Louis: Demand fair; trend steady; supply adequate; $95 sacked.

Boston: Demand and supply steady; $85 nominal.

Seattle: Demand and trend steady; supply good; $58.50 ex-dock, truck lots.

Ft. Worth: Demand quiet; supply adequate; $85 sacked, f.o.b. Ft. Worth, local manufacture.

Louisville: Demand fair; supply normal; trend stronger; $75@82.50.

BREWERS DRIED GRAINS

Louisville: Demand fair; supply ample; trend steady; $44.

Philadelphia: Demand dull; supply light; $53.

San Francisco: Demand fair; supply ample; $54.

St. Louis: Demand fair; trend steady; supply adequate; $36 bulk, $41 sacked.

Buffalo: Demand and supply fair; $44.50 bulk, Boston.

Milwaukee: Demand and supply fair; $43.50.

Boston: Demand fair; supply adequate; 26% $52@52.50; 22% $52.

New Orleans: Demand slow; trend steady; supply light; 26% $51.50@53.

Cincinnati: Demand poor to fair; trend steady; supply fair; $47@50.

Chicago: Demand fair; supply adequate; 26% $43.50@44.

Los Angeles: Demand good; trend steady; supply ample; $49 bulk, $53 sacked.

Seattle: Demand slow; supply ample; trend easier; $54 f.o.b. car, Seattle.

Ft. Worth: Demand fair; supply scarce for nearby shipment; 26% $51@52 delivered Ft. Worth.

BREWERS DRIED YEAST

Portland: Demand good; supply ample; trend unchanged; 8½¢ lb.

Louisville: Demand slow; trend steady; supply ample; 10¢ lb.

Chicago: Demand good; supply limited; 10@11½¢ lb. in carlots; 10¼@12½¢, l.c.l.

Denver: Demand fair; trend unchanged; supply ample; $11 cwt.

Boston: Demand and supply steady; 11¢ lb.

Buffalo: Demand good; trend firmer; supply limited; $10.85 cwt.

Los Angeles: Demand steady; trend unchanged; supply ample; 9½¢ lb. in 5-ton lots; 11¢ lb. in less than 5-ton lots.

San Francisco: Demand fair; supply good; 10¢ lb.

Seattle: Demand slow; trend steady; supply ample; $10 cwt.

Pittsburgh: Carlots 10¢ lb.; 5-ton lots 11¢; ton lots 11½¢.

New Orleans: Carlots 10¢ lb.; 5-ton lots 11¢; ton lots 11½¢.

Cincinnati: Carlots 10¢ lb.; 5-ton lots 11¢; ton lots 11½¢.

New York: Carlots 9½¢ lb.; 10-ton lots 10¢ lb.; 5-ton lots 10½¢ lb.; ton lots 11¢ lb., f.o.b. New Jersey.

St. Louis: Demand fair; supply adequate; 10¢ lb. in carlots; 10½¢ lb. in 5-ton lots; 11¢ lb. in ton lots; 11½@12¢ lb. in less than ton lots.

Omaha: Demand good; supply adequate; 11¢ lb.

Milwaukee: Demand good; supply limited; 10½@11½¢ lb. in carlots; 10¾@12½¢ lb., l.c.l.

BUTTERMILK (CONDENSED)

Louisville: Demand slow; supply normal; trend steady; $3.25 cwt.

Los Angeles: Demand slow; trend unchanged; supply ample; 5½¢ lb. in 100-lb. lots, 4¾¢ lb. in 500-lb. lots.

Ogden: Supply normal; $4.95 100-lb. drum.

San Francisco: Demand fair; supply good; $5 cwt.

Philadelphia: Demand moderate; supply fair; $4.25 cwt.

Boston: Demand slow; supply light; 3¾¢ lb.

New Orleans: Demand slow; trend steady; supply adequate; $4.25@4.90.

Chicago: Demand slow; supply adequate; $3.25@3.50 cwt. in carlots.

CALCIUM CARBONATE

Seattle: Demand and trend steady; supply good; $14, ex-warehouse, truck lots.

Cincinnati: Demand fair; trend steady; supply adequate; $8@9.

Los Angeles: Demand steady; trend unchanged; supply ample; $10.25, sacked.

Minneapolis: Plain $11; iodized (⅛ lb. KI per ton) $14.45; iodized manganesed $15.90, in 100-lb. bags.

Chicago: Plain $8.90 ton in 100-lb. bags, delivered.

CALCITE CRYSTALS AND FLOUR

(All prices net, including freight and tax)

New York: Crystals $15.01, flour $10.01.
Buffalo: Crystals $15.82, flour $10.82.
Toledo: Crystals $17.60, flour $12.60.
Boston: Crystals $16.31, flour $11.31.
Limecrest, N.J.: Crystals $10.50; flour $5.50.

CHARCOAL

Chicago: Demand quiet; supply adequate; poultry charcoal $102 ton in 50-lb. multiwalls.

Boston: Demand and supply light; $95.

Los Angeles: Demand steady; trend unchanged; supply ample; hardwood poultry $176 ton, sacked, less than ton lots; $167.20 ton, sacked ton lots.

COCOANUT OIL MEAL

Portland: Demand slow; supply ample; trend unchanged; $66.

Seattle: Demand slack; trend steady; supply ample; $66 delivered truck lots.

San Francisco: Demand fair; supply ample; solvent $58, expeller $65.

Los Angeles: Demand slow; trend easier; supply ample; copra cake $64@65 offshore, August.

COD LIVER OIL (FORTIFIED)

New York: Trend steady; price per lb. in 55-gal. drums (413 to 420 lb.): 300 ICU, 750 A 14½@15½¢, 1,500 A 16½@19¢, 2,250 A 18½@21¢, 3,000 A 21½@23¢; 600 ICU, 1,500 A 18@19½¢, 2,250 A 20@22¢, 3,000 A 22@33¢; f.o.b. Massachusetts, New York and Pennsylvania.

Boston: Demand slow; supply ample; 600 D, 2,250 A 21¢ lb.; 300 D, 2,250 A 20¢; 300 D, 1,500 A 17½¢ lb.

CONDENSED FISH SOLUBLES

Denver: Demand fair; trend steady; supply ample; $180.

New York: Demand good; trend steady; supply good; 4½@4¾¢ lb., f.o.b. eastern shore.

Boston: Demand steady; supply ample; 3¾¢ lb.

Los Angeles: Demand steady; trend unchanged; supply ample; 4¾¢ lb.

CORN GERM MEAL

St. Louis: Demand slow; trend steady; supply adequate; $41 bulk, $46 in burlap sacks, St. Louis.

CORN GLUTEN FEED AND MEAL

(All quotations for all cities are sacked basis, bulk basis $5 less)

Minneapolis: Feed $49.39, meal $74.39.
Atlanta: Feed $57.21, meal $83.21.
Birmingham: Feed $56.36, meal $80.36.
Boston: Feed $54.12, meal $79.12.
Chicago: Feed $43, meal $68.
Cleveland: Feed $50.42, meal $75.42.
Denver: Feed $52.89, meal $77.89.
Ft. Worth: Feed $51.34, meal $76.34.
Indianapolis: Feed $47.94, meal $72.94.
Kansas City: Feed $43, meal $68.
Louisville: Feed $49.80, meal $74.80.
New Orleans: Feed $52.78, meal $77.78.
New York: Feed $53.71, meal $78.71.
Norfolk: Feed $53.09, meal $78.09.
Philadelphia: Feed $53.30, meal $78.30.
Pittsburgh: Feed $51.34, meal $76.34.
St. Louis: Feed $43, meal $68.

CORN OIL MEAL

Cincinnati: Demand poor; trend steady; supply adequate; $51.65.

COTTONSEED OIL MEAL

Portland: Demand slow; supply ample; trend unchanged; $66.

Seattle: Demand fair; trend easy; supply good; $76 delivered truck lots, 41% expeller process.

Ft. Worth: Demand improved; offerings increased carlots, 41% old process: New crop $49 f.o.b. Rio Grande Valley points, $53.50@55 f.o.b. north and central Texas mills, depending on location; solvent 41% low gossypol $59@60 delivered Ft. Worth; pellets $2 additional; cottonseed hulls nominal, $25@26 prompt delivered Ft. Worth.

Louisville: Demand slow; trend stronger; supply ample; old process $62, new process $63.

Cincinnati: Demand poor; trend steady; supply tight; solvent $64.75; old $55.75.

Denver: Demand fair; trend steady; supply ample; 30-ton car $61.

Ogden: Supply normal; 41%, $70@75.

Chicago: Demand slow; supply tightening; hydraulic $65, solvent $64.50.

San Francisco: Demand good; supply ample; expeller $65.50; solvent $64.50.

Philadelphia: Demand slow; supply fair; $70.50.

Wichita: Demand slow; supply sufficient; 41%, $63; solvent, $62@63.

Kansas City: Demand light to fair; supply light; trend steady; $54@54.50, sacked, Memphis for old process meal, $52@53 for solvent meal.

Buffalo: Demand poor; trend steady; supply adequate; $72, sacked, Boston.

Boston: Demand and supply; $70.50.

Los Angeles: Demand slow; trend weaker; supply ample; $63 sacked.

Atlanta: Demand good; trend strong; supply limited; 41% $60, sacked, immediate.

Memphis: Demand good; trend higher; supply scarce; prime 41% protein, old process $56.50 sacked; new process 41% solvent $54.50 sacked.

Omaha: Demand fair; supply ample; 41% solvent $68.50.

CURACAO PHOSPHATE

New York: Ground Curacao phosphate in 100-lb. bags $48 ton, f.o.b. cars or trucks, New Orleans, Jacksonville, Fla., or Philadelphia.

D ACTIVATED ANIMAL STEROL, POWDERED

Kansas City: Demand normal; supply adequate; trend steady; 10½@11¢ lb.

New York: Trend steady; price per lb. in 50- and 100-lb. bags or 100-lb. drums; 1,500 ICU 5@12¢ bagged, 12@13¢ drums; 3,000 ICU 13@17¢ bagged, 17@18¢ drums; f.o.b. or delivered basis Pennsylvania, Delaware or New York.

Cincinnati: Demand fair; trend steady; supply ample; 1,500 ICU 11@12¢; 3,000 ICU 18¢, warehouse.

Chicago: Demand good; supply adequate; 4,000,000 U.S.P. units per lb., 15¢ lb., ton lots and less 17¢; 12,000,000 units per lb., 5 tons to a carload 28¢ lb.; ton lots and less 30¢ lb.

DEFLUORINATED PHOSPHATE

Coronet, Fla.: Minimum phosphorus 17%, minimum calcium 34%, maximum fluorine .17% $58 net ton, f.o.b. Coronet in 100-lb. multiwall bags, $55 in bulk.

Tupelo, Miss.: Minimum phosphorus 13%, minimum calcium 31%, maximum fluorine .12%, $51 net ton, f.o.b. Tupelo in 100-lb. multiwall bags, $48 in bulk.

Houston: Minimum phosphorus 19%, minimum calcium 32%, maximum calcium 35%, maximum fluorine .19% $69.50 net ton, f.o.b. Houston; 100-lb. multiwall bags; $66.50 in bulk.

Wales, Tenn.: Minimum phosphorus 18%, minimum calcium 33%, maximum calcium 36%, maximum fluorine .18% $67.10 net ton, f.o.b. Wales, in 100-lb. multiwall bags, $64.10 in bulk.

DICALCIUM PHOSPHATE

Texas City, Texas: 19% minimum phosphorus, 25% minimum calcium, 28% maximum, 0.11% maximum fluorine $76 net ton, f.o.b. Texas City in 100-lb. multiwall bags.

Minneapolis: 18.5% phosphorus, 24% calcium granular or fine ground $89.55 ton, delivered; $3 ton less in bulk.

Trenton, Mich.: Minimum phosphorus 21%, maximum fluorine .01% guaranteed $90.30, f.o.b. Trenton, in 100-lb. multiwall bags; minimum phosphorus 18½%, maximum fluorine .01% guaranteed $79.55, f.o.b. Trenton in 100-lb. multiwall bags.

Columbia, Tenn.: Minimum phosphorus 18½%, minimum 25% calcium, maximum .01% fluorine guaranteed $79.55 ton, f.o.b. Columbia, in 100-lb. multiwall bags. Freight equalized with nearest producing point, carload basis; bulk $3 ton less.

Chicago: Stock food grade, 18.5% phosphorus, 20,000 lb. or more $79.55 net ton in 100-lb. papers, basis Chicago Heights, Ill., or Nashville, Tenn., less than 20,000 lb. $89.55; 21% phosphorus, 20,000 lb. or more $90.30, basis Chicago Heights and Nashville, less than 20,000 lb. $100.30; bulk, boxcars or hoppers, $3 net ton less than bagged material.

Bonnie, Fla.: Minimum phosphorus 18½%, granular $79.55; freight equalized with closest producing point, carload basis.

Denver: Demand fair; trend unchanged; supply ample; 18.5% $79.55 f.o.b. Chicago Heights, Ill.

Cincinnati: 18% phosphorus $88@89.

Portland: Demand slow; supply ample; trend unchanged; $102.

DISTILLERS DRIED GRAINS

Boston: Demand active; supply steady; light, domestic, $62; Canadian, $60; dark domestic, $63; Canadian, $61.

San Francisco: Demand fair; supply ample; solubles $85.

Buffalo: Demand fair; trend steady; supply poor; $57.50, bulk, Boston.

Cincinnati: Demand poor; trend steady; supply tight; light $55; dark $55.50.

Philadelphia: Demand slow; supply light; $61.50.

Seattle: Demand dull; trend steady; supply good; $62.50 delivered truck lots.

Louisville: Demand fair; trend steady; supply light; bourbon, light, $51.50; dark, $52.50; solubles, $73.

DRIED BEET PULP

Ft. Worth: Demand slow; supply moderate; carlots, 50-lb. papers nominal $68@69 delivered Ft. Worth.

Milwaukee: Demand good; supply fair; molasses $60; plain $61.

Portland: Demand good; supply limited; trend unchanged; $55.

San Francisco: Demand good; supply fair; $53.19.

Cincinnati: Demand poor; trend steady; supply adequate; $65@66.50.

Seattle: Demand slow; trend easy; supply good; $48 delivered carlots (new crop).

Ogden: Supply average; $45@50.

Buffalo Demand poor; trend steady; supply fair; $73, sacked, Boston.

Boston: Demand spotty; supply adequate; $70@72.50.

New Orleans: Demand good; trend steady; supply adequate; $50@53.

Atlanta: Demand slow; trend steady; supply limited; $76.35 sacked, immediate.

Los Angeles: Demand steady; trend steady; supply ample; molasses $46.50 sacked in papers.

DRIED BUTTERMILK

New Orleans: Demand slow; supply adequate; trend firmer; $8.25@8.50 cwt.

Ft. Worth: Demand very slow; supply light; local production $10 cwt. f.o.b. Ft. Worth.

Chicago: Demand slow; supply adequate; medium acid $8@8.50, sweet cream $8.50@9 cwt. in carlots.

San Francisco: Demand fair; supply ample; 11¢ lb.
Ogden: Supply normal; $7.25 100-lb. bag.
Wichita: Demand slow; supply adequate; $8 cwt.
Buffalo: Demand good; trend firmer; supply limited; $8.65 cwt.
Milwaukee: Demand fair; supply fair; $10.50 cwt.
Boston: Demand and supply light; 9¢ lb.

DRIED CITRUS MEAL

San Francisco: Demand good; supply fair; $49.
Los Angeles: Demand good; trend steady; supply ample; orange pulp $36 bulk; $41 ton sacked; lemon pulp $34 ton bulk, $39 sacked.
Atlanta: Demand good; trend strong; supply limited; $48 sacked immediate; meal demand fair, supply ample; $38 sacked, immediate.
Buffalo: Demand poor; trend steady; supply fair; $41, sacked, f.o.b. Florida points.
Boston: Demand poor; supply ample; $39.50, f.o.b. Florida.
New Orleans: Demand fair; supply adequate; trend steady; $41@42 Florida points.

DRIED BUTTERMILK

Portland: Demand slow; supply ample; trend unchanged; $12.50 cwt.
Louisville: Demand slow; supply normal; trend stronger; 9½@10¢ lb.
Minneapolis: Price unchanged at $7.50@8.25 cwt.
Los Angeles: Demand fair; trend steady; supply ample; 11¢ lb.

DRIED SKIM MILK

Louisville: Demand slow; supply ample; trend stronger; 11@12¢.
Ogden: Supply average; $15.15 100-lb. drum.
New Orleans: Demand slow; supply adequate; trend steady; $12@12.25 cwt.
Cincinnati: Demand fair; trend steady; supply adequate; 11@12¢ lb.
Chicago: Demand slow; supply adequate; $10.25@10.50 cwt. in carlots.
Milwaukee: Demand fair; supply fair; $12 cwt.
Buffalo: Demand good; trend steady; supply ample; spray, $11 cwt.; roller, $12.50 cwt.
San Francisco: Demand fair; supply fair; 13½¢ lb.
Philadelphia: Demand moderate; supply fair; $12.50 cwt.
Boston: Demand slow; supply fair; 12¢ lb.
Los Angeles: Demand slow; trend unchanged; supply ample; 14¢ lb. in less than ton lots; 13¾¢ lb. in ton lots.
Minneapolis: Price unchanged at $10.50@11 cwt.

DRIED WHEY

Ogden: Supply normal; $6.90 100-lb. bag.
Ft. Worth: Demand slow; supply adequate; carlots, standard $6.25 cwt. sacked, delivered Ft. Worth or any Texas point, or in ton lots f.o.b. warehouse Ft. Worth.
Denver: Demand fair; supply ample; trend unchanged; $7 cwt., $6 carlots.
Louisville: Demand fair; trend steady; supply ample; 6@6½¢ lb.
Philadelphia: Demand moderate; supply fair; $6.25 cwt.
Portland: Demand slow; supply ample; trend unchanged; $8 cwt.
San Francisco: Demand steady; supply good; $5.50 cwt.
Seattle: Demand and trend steady; supply good; $6.25 cwt. ex-warehouse, lcl.
Kansas City: Demand normal; supply adequate; trend steady; $5.10 cwt., f.o.b. producing plant; partially delactosed $5.25.
Boston: Demand steady; supply plentiful; 5¾¢ lb.
Chicago: Demand slow; supply adequate; $5.30@5.40 cwt. in carlots.
Cincinnati: Demand fair; trend steady; supply adequate; $5.25 cwt.
New Orleans: Demand fair; trend steady; supply adequate; $5.25@5.80 cwt.
Minneapolis: Price unchanged at $5.25@5.50.
Los Angeles: Demand fair; trend unchanged; supply ample; $5.75 cwt. in carlots; $4 cwt. in l.c.l. in local warehouse.

FEATHER MEAL (HYDROLYZED)

Boston: Demand fair; supply light; $95 nominal f.o.b. shipping points.

FISH MEAL

Denver: Demand fair; trend steady; supply ample; 70% herring $1.95 unit, f.o.b. Seattle; 68% menhaden $132, f.o.b. Gulf.
Ogden: Supply normal; $2.20 per unit f.o.b. West Coast, 65%, $171@173.
Milwaukee: Demand and supply fair; 60% $160 Milwaukee.
Buffalo: Demand good; trend steady; supply ample; 60% protein, Menhaden, $140 bulk; $145 sacked.
San Francisco: Demand fair; supply ample; Peruvian $1.92½ per unit of protein; Canadian Herring $2.05 per unit of protein.
Boston: Demand and supply fair; 60%, $130.
New Orleans: Demand good; trend firm; supply limited; menhaden 60% $130@131, burlaps; scrap $126, f.o.b. Gulf.
Cincinnati: Demand poor; trend steady; supply adequate; $145@150.
Chicago: Demand spotty; supply fair; Eastern Menhaden fish meal, 60% protein, $127@131; Western blended, 60% protein, $122@124; Gulf, $128@130; Northwest herring-salmon blend, $124; Canadian herring, 73% protein $1.80@1.90 a unit of protein; 60% blended, $146 delivered Midwest points.
Ft. Worth: Demand excellent; limited offerings; Canadian Herring $1.80, nominal, per unit protein f.o.b. N.W. Canada; 60% imported Fish Meal prompt $134, f.o.b. Houston; 63% protein south African Pilchard Fullmeal, with dry solubles added $142.50 f.o.b. Houston, July-August arrival; $144.50 Sept. thru May, 1958, arrival.
Portland: Demand slow; supply ample; trend unchanged; $1.90 unit of protein.
Seattle: Demand fair; trend steady; supply ample; $1.90 unit protein ex-dock (Alaska Herring).
Louisville: Demand slow; trend steady; supply normal; $145.
Los Angeles: Demand slow; trend easier; supply ample; $2.05@2.10 per unit of protein, local production 60%.
Atlanta: Demand slow; trend steady; supply ample; 60% $137 sacked, immediate.
Minneapolis: Market on 70% unchanged at $1.80 a unit of protein, West Coast, immediate; 60% $143@146.

HAY

Cincinnati: Demand fair; trend steady; supply adequate; No. 1 timothy $20.50; No. 1 red clover $22; No. 1 second cutting green alfalfa $24; No. 1 red clover, mixed $24; wheat or oat straws $20.
New Orleans: Demand poor; trend lower; supply ample; No. 1 timothy $36@38, timothy and clover mixed $40@42; Kansas prairie $35@37, baled alfalfa $48@50.
Denver: Demand nil; baled alfalfa, no price quoted waiting for second cutting, no mountain hay moving.
St. Louis: Demand slow; trend lower; supply adequate; No. 1 alfalfa $24.50@29.50; No. 1 timothy $24@27; No. 1 clover $20@22.
Philadelphia: Demand slow; supply fair; $28@29.
Ogden: Supply normal; $1 baie; $15@17 ton in field or barn.
Wichita: Demand fair; supply sufficient; prairie $21, alfalfa $23.
Boston: Demand and supply fair; No. 2 timothy, $38@40.
Portland: Demand slow; trend weak; supply ample; $26.50.
Ft. Worth: Demand fair for alfalfa; improved inquiry for prairie; offerings alfalfa fair; prairie light; carlots, baled No. 1 alfalfa $42@44, No. 2 $40@42; prairie No. 2 $32@34; No. 2 Johnson $28@30 delivered Texas common points.
Louisville: Demand dull; trend steady to a shade easier; supply ample; old hay, No. 1, $23@25 ton; No. 2, $21@23; straw, $18@20, with straw scarce. Not much new hay moving as it is not needed; plenty of old hay available; new hay has been running high in moisture.
Seattle: Demand slow; trend easy; supply good; alfalfa $26 delivered truck lots, U.S. No. 2 green.
Los Angeles: U.S. No. 1 $28@30, moderate offerings, limited demand; U.S. No. 2 leafy $26@27, moderate offerings, limited demand; U.S. No. 2 green $26@27, moderate offerings, better demand; U.S. No. 2 $24@25, light offerings, moderate demand.

HOMINY FEED

Buffalo: Demand fair; trend steady to lower; supply fair; $53, bulk, Boston.
Milwaukee: Demand good; supply fair; $49 sacked Milwaukee.
Kansas City: Demand fair; trend steady; supply tight; $46@45.50, bulk, $3.50 more for sacked, yellow or white.
Boston: Demand fair; supply ample; $57.
New Orleans: Demand fair; supply light; trend steady; $49.50@56.50.
Cincinnati: Demand fair; trend steady; supply fair; $50.
Chicago: Demand slow; supply adequate; $47.50@48.
Seattle: Demand slow; trend firmer; supply good; $62 delivered sacked, carlots.
Louisville: Demand slow; trend steady; supply normal; $50.30.

LINSEED OIL MEAL

New Orleans: Demand slow; trend steady; supply limited; 32% or better $69@69.50.
Portland: Demand slow; trend lower; supply ample; $81.
Cincinnati: Demand poor; trend steady; supply fair; new process $62; old process $55.50.
Chicago: Demand fair; supply adequate; solvent $57.50@58; expeller $61@61.50.
Wichita: Demand fair; supply insufficient; 34% $73.
San Francisco: Demand fair; supply ample; $67.50.
Denver: Demand fair; trend steady; supply ample; 34% $68.50.
Philadelphia: Demand and supply fair; 34% $68.
Milwaukee: Demand good; supply fair; old process $60.25; new process $56.25.
Kansas City: Demand light; trend steady; supply adequate; solvent meal $45.50, bulk, Minneapolis, for July shipment; old process meal $49.50 for July.
Boston: Demand slow; supply light; $64.40 bulk.
Seattle: Demand slow; trend easy; supply limited; $81 delivered carlots, 29% protein (new crop).
Ft. Worth: Demand slow; supply adequate; carlots, 34% extracted July $69.39; August-Sept. $71.39.
Louisville: Demand dull; trend steady; supply ample; old process $67.10, new process $63.60.
Los Angeles: Demand fair; trend easier; supply ample; local production 29% protein $65@66 sacked, last half July.
Minneapolis: Market quiet; supply adequate; prices steady; 34% $45.50@46, immediate; old process $49@49.50, bulk, Minneapolis, immediate; 22% flaxseed screenings oil feed $27.50 bulk, Minneapolis.
Omaha: Demand fair; supply ample; 32% expeller $63.50, pellets $66; 34% solvent $59.50, pellets $62.

MALT SPROUTS

Boston: Demand and supply light; $46.70.
Milwaukee: Demand good; supply fair; odd weights $40; even weights $41.50.
St. Louis: Demand slow; trend steady; supply adequate; No. 1 bulk $36, No. 1 sacked $43, No. 2 bulk $34.
Chicago: Demand slow; supply decreasing; No. 1 $38.50@39.
Cincinnati: Demand fair; trend steady; supply adequate; No. 1 $45@46.
New Orleans: Demand fair; trend steady; supply adequate; $39@42.

MEAT SCRAPS

New York: Demand active; trend upward; supply good; 50% $72.50, 55% $77.50, bulk; 50% $75.50, 55% $80.50, sacked.
Ogden: Supply normal; $85 ton in 100-lb. bags.
New Orleans: Demand fair; trend steady; supply adequate; 50% $90@93.
Cincinnati: Demand good; trend steady; supply adequate; 50% $74.50 ton, sacked, f.o.b. Cincinnati.
Chicago: Demand good; supply fair; 50% protein $75@77.50.
San Francisco: Demand good; supply fair; $1.60 per unit of protein.
St. Louis: Demand fair; trend higher; supply adequate; 50% $82@83, bulk; $87@88, paper sacks; $86@87, burlap sacks.
Wichita: Demand good; supply insufficient; 50% $85, f.o.b. plant; 55%, no quotations, no offerings.
Kansas City: Demand good; supply tightening; trend stronger; 50% meat and bone scraps $90@92.50, sacked.
Denver: Demand fair; trend steady; supply short; 50% $75.
Buffalo: Demand good; trend stronger; supply ample; 50% meat scraps, $77.50 bulk; $82.50 sacked.
Boston: Demand and supply good; $1.10 per protein unit; converted 50%, $67.50.
Portland: Demand good; trend higher; supply ample; $1.70 per unit of protein.
Seattle: Demand good; trend firmer; supply fair; $82.50 ex-warehouse, 50% protein.
Ft. Worth: Demand good; supply sufficient; meat and bone, 50% $75@77, f.o.b. or delivered Ft. Worth.
Louisville: Demand fair; trend firm; supply normal; $75@80.
Omaha: Demand good; supply limited, $85.
Los Angeles: Demand fair; trend easier; supply ample; $1.70 per unit of protein.
Minneapolis: Demand good; supply tight; rising price trend attributed mainly to decreased rate of slaughter at livestock packing plants; 50% meat and bone scraps $88.

MILLET SEED

St. Louis: Demand slow; trend steady; supply ample; recleaned Early Fortune $4.25 cwt., sacked; recleaned White Proso $4.25 cwt., sacked.

MILLFEED

Minneapolis: Prices rebounded after a mid-week low which saw prices at the lowest level in several years; prices so far this year have generally been lower than at comparable periods last year; demand good and supplies are sufficient to cover needs; bran $32.50@33.50; standard midds. $36@36.50; flour midds. $43@44; red dog $46@47.
Kansas City: Demand strong; trend higher; supply light, especially for sacked bran and bulk middlings; reduced running time coupled with the better demand has firmed the market; bran $32.50@33.25, shorts $34.50@35.25, sacked; bran $29@29.50, shorts $32.50@33, middlings $31@31.75, bulk.
Wichita: Demand fair; supply sufficient; basis Kansas City: Bran $32.50@33, shorts $34.25@34.75; bran declined $1.50 ton and shorts $3.25 compared with the preceding week.
Ft. Worth: Demand fair for bran, slow for shorts; offerings moderate on bran, adequate on shorts; carlots, burlaps, prompt, bran $40.50@41.50; gray shorts $42@43 delivered Texas common points; $2 lower on bran and $3 lower on shorts, compared with previous week.
Chicago: Demand was merely so-so during the week ending July 17, and further small losses were scored by bran and standard midds. Heavier millfeeds held steady, supplies were only fair. Bran $35@36.50, standard midds. $40.50@41, flour midds. $49@50, red dog $52@52.50.
St. Louis: Demand fair; price trend firm; supply adequate; bran $37.50@38, shorts $39.50@40; St. Louis switching limits.
Omaha: Demand fair; supply good; bran $33.25, shorts $35.25, bulk standard midds. $33.
Cincinnati: Demand poor; trend steady to easy; supply adequate; bran $40.50@41.50; midds. $44.50@45.50.
Boston: Demand steady; supply good; bran, domestic, $47.20; Canadian, $49; middlings, domestic, $49.20; Canadian, $50.
Buffalo: The mixer business was fair to middling with a 4- to 4½-day week with nothing heavy doing. Prices were unchanged from last week and sales were on the slow side. Bran dropped 50¢, middlings were unchanged and red dog dropped $1 from last week. Quotations, July 17: Bran $39.50@40.75; standard midds. $42@43.75; flour midds. $55; red dog $55@56.25.
New York: Demand good; trend lower; supply good; bran $46.75@47.50, standard midds. $49.25@50.50.
Philadelphia: Demand spotty; supply fair; bran $49, standard midds. $50.50, red dog $54.
New Orleans: Demand good; supply light;

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trend stronger; bran $44@45.75; shorts $48 @49.50.

Memphis: Demand poor; trend steady; supply adequate; wheat bran $40.50; gray shorts $42.50; standard midds. $41.50.

Louisville: Demand fair; trend easy; supply normal; bran $43.50, mixed feed $44.90, shorts $45.25, standard midds. $48.

Seattle: Demand poor; trend easy; supply ample; $40 delivered common transit points, carlots.

Portland: Demand slow; trend lower; supply ample; $39.

Denver: Demand slow; trend weaker; supply ample; bran $35.75, shorts $37.50, mill run $36.75.

Ogden: Supply average; to Utah and Idaho: Red bran and millrun $40; midds. $45; to Denver: Red bran and millrun, $47; midds. $52; to California: Red bran and millrun $47.50; midds. $52.50, f.o.b. San Francisco and Los Angeles.

San Francisco: Demand fair; supply ample; $46; red bran $50.50.

Los Angeles: Demand slow; trend easier; supply ample; standard millrun $46@46.50, sacked; red bran $48@49, sacked.

MINERAL FEED

Denver: Demand fair; trend unchanged; supply ample; 7.5% phenothiazine 45 lb. block $4.69; 8.2% phosphorus 50 lb. block $3.50; 7.5% phenothiazine, 8.2% phosphorus 45 lb. block $5.25; 5% phosphorus 50 lb. block $2.65.

Ogden: Supply normal; $108 ton in 50-lb. blocks; $98 ton, granular 50-lb. bags.

San Francisco: Demand steady; supply good; all purpose with iodine $70.

Wichita: Demand moderate; supply sufficient; all-purpose with iodine, 50-lb. blocks $86, 100-lb. bags $90, f.o.b. plant.

Portland: Demand slow; supply ample; trend unchanged; $42.

Seattle: Demand fair; trend steady; supply good; $48 ex-warehouse for competitive brands; $85 ex-warehouse for high phosphorus mixtures.

Ft. Worth: Demand fair; supply ample; all purpose granules $89, block $94; mineral phosphorus 6% granules $105, block $110; cattle-sheep mineral 7% phosphorus granules $99, block $103; hog mineral phosphorus 3½% granules $88; phosphorus 2% $77 (all in 50-lb. paper bags).

Sioux City: 50-lb. mineral blocks, 8.2% phosphorus $92; 7.5% phenothiazine sheep mineral blocks $4 each.

MOLASSES

Kansas City: Demand slightly improved though still light; trend stronger; supply adequate; 18¾@19½¢ gal. tank cars, New Orleans, with most sales now reported at about 19¢.

Atlanta: Demand slow; supply limited; trend steady; citrus $25 ton, bulk f.o.b. Florida producing points immediate.

Memphis: Demand poor; trend steady; supply ample; blackstrap, 18¾¢ gal., tank car, f.o.b. New Orleans.

Minneapolis: Demand slow; supply good; price trend steady; 19¢ gal. f.o.b. New Orleans.

Los Angeles: Demand steady; trend unchanged; supply ample; $33, in tank cars; $33.25, in tank trucks.

Buffalo: Demand good; trend lower; supply good; 26½¢, f.o.b. Albany, N.Y.

New York: Demand poor; trend lower; supply fair; blackstrap 26¢ gal., tank cars, tank wagons, f.o.b. New York.

Denver: Demand slow; supply ample; trend weaker; $53 tank cars.

San Francisco: Demand and supply good; $33, f.o.b. cars Richmond, Cal.

Boston: Demand seasonal; supply ample; 28½¢ gal. in tank cars.

Cincinnati: Demand fair; trend steady; supply adequate; 18¾@19¢ gal., New Orleans.

New Orleans: Demand slow; trend easier; supply adequate; 19¢ gal. in tank cars or trucks, f.o.b. New Orleans; 600-lb. in customers' drums $11.67.

Seattle: Demand slow; trend easier; supply good; $33 f.o.b. Seattle, tank carlots or truck lots.

Louisville: Demand slow; trend weak and still; supply ample; declining week by week but in fractions of cents, instead of half cents; 18¾¢ in tank car lots, f.o.b. Gulf ports.

Ft. Worth: Demand very slow; supply adequate; blackstrap 22½¢ gal., f.o.b. Houston; delivered Ft. Worth truck, $46.17 ton, seller's market price on date of shipment.

NIACIN

New York: Trend steady; $5 kilo, 50-kilo lots; $5.10 kilo, 10-kilo lots; $5.20 kilo, 5- and 2½-kilo lots; $5.30 kilo, 1-kilo lots; freight prepaid or paid to destination.

OAT PRODUCTS

New Orleans: Demand fair; trend easier; supply ample; whole or ground $68@71.

Cincinnati: Demand poor; trend steady to easy; supply adequate; reground oats $22.50; pulverized white oats $50; rolled oats $92.

Chicago: Demand fair; supply adequate; reground oatfeed $16; fine ground feeding oatmeal $70@72; feeding rolled oats $83@84.

St. Louis: Demand fair; supply adequate; reground oat feed $18.50 in 100-lb. burlap sacks, choice $50.

Philadelphia: Demand dull; supply fair; pulverized white $53.50, Canadian oat feed $24, nominal; domestic oat feed $24.

Boston: Demand fair; supply ample; white pulverized $49@53; reground oat feed $19.50.

Ft. Worth: Demand slow; supply sufficient; oat millfeed $50.05; reground oat millfeed 8% protein $33.50, 3% $26.95.

Portland: Demand slow; trend unchanged; supply ample; rolled $59, ground $56, cleaned $58.

Seattle: Demand fair; trend easy; supply ample; whole $60, ground $60, rolled $62, all ex-warehouse, l.c.l., sacked.

Louisville: Demand fair; trend firm; supply ample; reground $23 ton; rolled oats $87.25; feeding meal $83; pulverized white $59.50; crimped white $74.25.

Memphis: Demand poor; trend steady; supply ample; 3½% protein, reground oatfeed $22.25.

Los Angeles: Demand fair; trend steady; supply ample; $61@62, sacked, local production.

Minneapolis: Demand dull; price trend unchanged; supply adequate; feeding rolled oats $56; standard pulverized $46; feeding oatmeal $72; crimped $62; reground $15.

OYSTER SHELL

San Francisco: Demand fair; supply ample; Local $15, eastern $26.

Boston: Demand good; supply plentiful; $13 in paper.

Cincinnati: Demand fair; trend steady; supply adequate; $21.75.

New Orleans: Demand fair; trend steady; supply ample; $14.80@15 local.

Portland: Demand good; trend unchanged; supply ample; western $30, eastern $37.50, granite grits $27, oyster shell flour $18.

Seattle: Demand steady; trend steady; supply good; eastern $38 l.c.l. ex-warehouse.

Louisville: Demand slow; trend steady; supply ample; in 80-lb. bags $22.26; in 50's $22.57; in 25s, $24.75.

Los Angeles: Demand and trend steady; supply ample; $14.80 sacked.

PEANUT OIL MEAL

Milwaukee: Demand and supply fair; 26% $50.50.

Atlanta: Demand fair; trend steady; supply limited; 41% $62 sacked, immediate.

PEAT MOSS

San Francisco: Demand fair; supply ample; $3.35 bale.

Philadelphia: Demand and supply fair; $3.12 bale, f.o.b. pier.

Boston: Demand and supply steady; $3.10 bale.

Chicago: Demand good; supply moderate; $3.85@3.95 standard 7½ cu. ft. bale.

Seattle: Demand fair; trend steady; supply good; $3.50 bale, l.c.l., ex-warehouse.

Portland: Demand slow; trend unchanged; supply ample; $3.25 bale.

Los Angeles: Demand fair; trend unchanaged; supply ample; Canadian 6.1 cu. ft. bales $3.70 bale.

POTASSIUM IODIDE

New York: Trend steady; granular or crystals $1.90 lb. in 250-lb. drums, $1.92 lb. in 100-lb. drums, $1.95 lb. in 25-lb. drums; 90% KI in calcium stearate or carbonate mixtures, $1.81 lb. in 250-lb. drums or 200-lb. lots, $1.83 lb. in 100-lb. drums, $1.86 lb. in 25-lb. drums; f.o.b. New York, New Jersey or Pennsylvania; freight allowed to destination on 100-lb. drums or larger packings.

St. Louis: Demand fair; trend firm; supply adequate; 100% pure potassium iodide U.S.P., 250 lb. average in drums $1.90, 100 lb. lots in fiber drums $1.92; 90% potassium iodide calcium stearate mixture, 225 lb. lots in leverpak drums $1.81, 100 lb. lots in fiber drums $1.85.

RIBOFLAVIN

New York: Trend steady; feed grade (in feed supplements) 4½¢ gram in 2.36 to 18 gm./lb. mixtures, freight prepaid or paid to destination.

RICE BY-PRODUCTS

Ft. Worth: Demand slow; increased offerings; carlots, nominal rice bran $29@30, prompt shipment, f.o.b. south Texas rice mills; hulls $3 f.o.b. mills.

San Francisco: Demand fair; supply ample; bran $48, polished $52.

New Orleans: Demand improving; trend steady; supply adequate; bran $33@34 Louisiana mills, no quote on hulls.

Atlanta: Demand slow; trend steady; supply limited; bran $40 sacked, immediate.

Los Angeles: Demand slow; trend unchanged; supply limited; California production $50 sacked.

SCREENINGS

Chicago: Demand fair; supply plentiful; ground grain screenings $27.50; Canadian refuse, bulk, $18.

Cincinnati: Demand fair; trend steady; supply adequate; Canadian $24.50; barley $16.50@23.50.

Denver: Demand fair; trend steady; supply ample; $24.

Buffalo: Demand fair; trend steady; supply adequate; ground in sacks $28.50, New York; lake & rail unground $21, bulk, New York.

Ft. Worth: Demand poor; supply sufficient; 12% protein, ground $36.50 sacked, delivered Ft. Worth.

Minneapolis: Demand quiet; prices unchanged; supply ample; country run $15@20; lights $5@12; mediums $12@14; heavies $22@32; Canadian $13, bulk, Duluth; Canadian, ground, $23, sacked Duluth; flax screenings $18.

SOFT PHOSPHATE WITH COLLOIDAL CLAY

Atlanta: $18.85@19.10.
Buffalo: $23.65@23.90.
Chicago: $23.10@23.35.
Cincinnati: $21.80@22.
Des Moines: $23.40@23.85.
Kansas City: $23.20@23.45.
Memphis: $20.50@20.70.
Minneapolis: $24.25@25.55.
Philadelphia: $23.65@23.90.
St. Louis: $22.50@23.75.
Tampa: $18@18.20.
Toronto: $27.50@27.80.

SORGHUMS

Ft. Worth: Demand fair; offerings sufficient; carlots, bulk, No. 2 yellow milo $2.13 @2.15 delivered Texas common points.

Cincinnati: Demand fair; trend steady; supply adequate; quotations $2.80 cwt.

Los Angeles: Demand fair; trend easier; supply ample; milo $2.55 cwt. bulk, rail delivery.

SOYBEAN OIL MEAL

New Orleans: Demand fair; trend steady; supply ample; 44% $66.50@67.

Seattle: Demand steady; trend firmer; supply good; $78 delivered carlots.

Portland: Demand good; trend higher; supply ample; $43.

Ft. Worth: Demand good; limited offerings nearby shipment; carlots, 44% $69.90@70.90 depending on origin and tonnage; trucks $66 delivered Ft. Worth.

Louisville: Demand slow; trend strong; supply ample; $59.42, up $2, due to strong price of beans.

Cincinnati: Demand poor to fair; trend steady to higher; supply adequate; $46.50@47.50.

Chicago: Soybean oil meal picked up some strength during the week ending July 17, mainly because of lower production. Demand was fair, and some new crop meal was sold. 44% soybean oil meal $58.

Decatur: Demand and supply fair; 44% bulk, unrestricted $47.50@48.

Milwaukee: Demand good; supply fair; $47 bulk, Decatur.

San Francisco: Demand fair; supply ample; $78.

Boston: Demand and supply steady; $45.50 @46 f.o.b. Decatur.

Philadelphia: Demand spotty; trend unsettled; $46 bulk, Decatur.

Ogden: Supply normal; $85@90.

Denver: Demand slow; trend stronger; supply ample; $69@70.

Kansas City: Demand fair; trend strong; supply, nearby tight; for Kansas City and western shipment $47@47.50 bulk, Decatur; unrestricted $48@49.

Wichita: Demand slow; supply ample; 44% $63.50, 50% $71.50, f.o.b. Wichita.

Los Angeles: Demand slow; trend firmer; supply ample; $78.49@78.99 sacked.

Memphis: Demand good; trend higher; supply scarce; prime 44% solvent $57, sacked, f.o.b. Memphis.

Atlanta: Demand good; trend strong; supply ample; 44% $67 sacked, immediate.

Omaha: Demand fair; supply ample; 41% expeller $66.50; 44% solvent $61, pellets $63.50.

Minneapolis: Demand fair; supply good; price trend firm, $43@44, bulk, Decatur.

SUNFLOWER SEED

St. Louis: Demand fair; trend steady; supply ample; black large $15.50 cwt., medium $14 cwt., small $10.50 cwt.; gray large $16 cwt., medium $14.50 cwt., small $11 cwt.

TANKAGE

Wichita: Demand good; supply sufficient; 60% $85 f.o.b. plant.

Kansas City: Demand normal; trend steady; supply adequate; 60% digester tankage $86.50@87.50, sacked.

St. Louis: Demand good; trend higher; supply adequate; 60% $82@83, $87@88 in paper sacks, $86@87 in burlap sacks.

New Orleans: Demand fair; trend stronger; supply limited; 60% $92.50@93.

Cincinnati: Demand good; trend steady; supply adequate; 60% digester $84.

Chicago: Demand good; supply fair; 60% protein $80@82.50.

Ft. Worth: Demand fair; supply very scarce; 60% digester $85@87 f.o.b. Ft. Worth.

Louisville: Demand better; trend stronger; supply normal; $82.50@87.50.

Omaha: Demand good; supply limited; $85.

Minneapolis: Demand good; price trend higher; supply tight; decreased slaughter at packing plants felt to be main factor in rising price trend; 60% digester $90.

VITAMIN E FEED SUPPLEMENT

Rochester, N.Y.: Demand and supply good; trend steady; 50- and 100-lb. drums $1.80 lb., 25-lb. drums $1.85 lb., f.o.b. manufacturing plants, freight allowed to destination.

New York: Demand and supply good; trend steady; 50- and 100-lb. drums $1.80 lb., 25-lb. drums $1.85 lb., f.o.b. manufacturing plants, freight allowed to destination.

WHEAT GERM MEAL

New Orleans: Demand fair; trend steady; supply adequate; $64@66 cottons.

Buffalo: Demand fair; trend steady to higher; supply fair; commercial grade $59, sacked, f.o.b., Buffalo.

Chicago: Price higher at $60.

NEW MANAGER NAMED

KENTLAND, IND. — John Lamie, Fowler, Ind., has been named the new manager of the Fowler Grain Co. at Kentland. He succeeds E. H. Stembel, who retired this year. Mr. Lamie has been with the firm four years.

Cattle Prices Strong In California Markets

SAN FRANCISCO — Stronger prices for cattle surrpised livestock men recently as light receipts firmed up the tone of trading.

L. W. Feldmiller, manager of the Valley Livestock Marketing Assn., said that holidays usually produce poor markets, but that this year provided an exception. Cattlemen apparently planned on a poor market and held back their shipments during the holiday week. As a result, receipts were smaller and the market was better.

Activity has been good on fed cattle both in the country and in the market, Mr. Feldmiller said.

"We are still a month away from a large supply of choice cattle in this state," Mr. Feldmiller said, "so we should look forward to continued stability and strength in the fed cattle market."

CHICK OUTPUT

(Continued from page 1)

placement chicks, the nation's laying flock will continue to decline from a year earlier during the rest of 1957. Even if the rate of lay per bird continues to increase, the sharp reduction in replacement birds will mean smaller egg production this fall and winter than a year earlier. The reduced number of pullets will be only partially offset by lighter culling, according to USDA.

USDA went on to comment that the smaller replacement hatch also probably will slow the seasonal net build-up in the laying flock until later this summer than last.

Although still below a year earlier, most wholesale egg prices rose during June and early July, USDA pointed out. After late summer prices are likely to be higher than a year earlier, with the seasonal increase in prices in the next few months expected to be more pronounced than in other recent years.

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POULTRY CONVENTION

(Continued from page 1)

which included a demonstration set-up of bins and bulk handling equipment and vehicles.

The industry, by a substantial majority, indicated that it does not favor government intervention as a possible solution to its problems. In a straw vote conducted during the convention, 79% of the hatcherymen casting ballots turned thumbs down on compulsory production controls.

Officials of the APHF decided to take the poll because some members of the industry, including members of the APHF, have proposed such controls, according to Fred L. Donsing, Rio Linda, Cal., retiring president of the federation.

New President

C. J. McAleavy, Wausau, Wis., was elected president to succeed Mr. Donsing. Other officers chosen were: Vern F. Steckley, Kendallville, Ind., and Ray Parmenter, Franklin, Mass., vice presidents; D. D. Slade, Lexington, Ky., treasurer; O. H. Green, Spartanburg, S.C., senior executive director; Mr. Donsing, junior executive director.

Don M. Turnbull, Kansas City, was renamed executive secretary, and Dr. E. M. Funk, University of Missouri, was continued as director of research.

The organization's board of directors considered a proposal of its consumer education committee that steps be taken to organize a National Egg Council for the promotion of greater egg consumption. The success of the National Broiler Council and the National Turkey Federation were cited by the committee in its report, which also proposed some eventual reorganization of the Poultry & Egg National Board.

Sound Promotion

Ideas for some sound promotion of eggs were presented to the convention by Dr. George Briggs, National Institute of Health, Washington.

Dr. Briggs pointed out that many people believe that the drop in egg consumption is due to bad publicity eggs have had as a source of cholestrol, which in the past had been implicated as a possible cause of heart disease.

"More recent scientific evidence now shows that the type and amounts of fats in the human diet is perhaps the most importnat factor in heart disease," Dr. Briggs said. "There is very good evidence today that the usual dietary levels of cholesterol, such as provided by eggs in the diet, have no effect on heart disease."

Dr. Briggs explained that the leading theory as to dietary cause of heart disease is the presence of an excess of saturated (hard) fats in the diet in relation to the unsaturated (soft) fats. Unlike most animal products, fat in eggs is chiefly the unsaturated variety, he said.

"There is no reason to fear eggs as a food," he said. "They are one of nature's most perfect foods, low in calories and containing well-balanced proteins and fats and a good supply of all essential minerals and vitamins. The continued use of eggs in our daily food for people of all ages is a contributing factor in the excellent health and well-being enjoyed by Americans today."

Answer Is "No"

A definite negative answer to the question posed in the title of his talk was given by Prof. L. H. Simerl, extension economist in marketing at the University of Illinois. His subject: "Is Production Control the Way to Poultry Profits?"

Prof. Simerl drew support for his conclusion from a number of points, including refutation of the basic precept of production control that "a small cut in production makes a big increase in price."

The theory is correct in the short run, he said, but in the long run it is not. He cited examples of products which had failed to show important price gains even when production had been curtailed sharply, among them lamb and mutton and butter.

Prof. Simerl also pointed out that usual methods of production control are not very effective, chiefly because they attempt to control only one production resource—such as rationing of land for crop control. Presumably control of poultry production also would be leveled only at one productive resource, the number of chicks allowed to be produced or purchased and raised.

Also, he continued, production control puts an industry at a disadvantage with competitor industries, and control does not eliminate or materially reduce competition within an industry.

Prof Simerl predicted a brighter future for the poultry industry on the basis of reduced competition from other food products. He noted that the competition from a huge expansion of red meat supplies in recent years may have been responsible for a large part of the distress in the poultry industry but that the production curve on beef and some other meats, in terms of per capita supply, is turning downward.

Nutrition Review

Dr. G. F. Combs, professor of poultry husbandry at the University of Maryland, reviewed the rapid progress that has been made in improved nutrition and feed efficiency in the past few years, particularly for broilers.

His review stressed the work that has been conducted in determining proper relationships of energy and protein in broiler feeds and some of the more recent studies involving mineral requirements.

Other scientific reviews were presented on breeding and disease problems of particular importance to hatcherymen.

A highlight of the convention program was presentation of a "phantom panel" of prominent but unidentified industry men on a darkened stage. They were interviewed on their business methods and concepts, and the result was a lively review of the various phases of poultry production. Panelists included a completely integrated operator, two feed manufacturers and two hatcherymen-feed dealers.

EGG-A-DAY LEGHORN PASSES 256 MARK

NEW BRUNSWICK, N.J.—Another week without missing a day's work has brought Meggi O'day's egg-a-day mark up to 256. The svelte Leghorn in the Hunterdon county egg laying test has now produced in 256 consecutive days, far more eggs than the average chicken produces in a year. Meg's consecutive total of 256 is her immediate claim to fame, but her record shows that she has missed laying only one day since Oct. 1 when the contest year began. In other words, she has laid 288 eggs in 289 days.

Two Join Staff of Sprout, Waldron & Co.

MUNCIE, PA.—Harold J. Alsted, vice president in charge of sales, has announced that Richard Farrell, formerly associated with the development staff of Naugatuck (Conn.) Chemical Division of U.S. Rubber Co., has been appointed as assistant to J. L. Grahek, sales manager of the pellet mill division.

Mr. Alsted also announced that Brown Jenkins, who for many years has been with Jones-Hettelsater Construction Co., Kansas City, has joined Sprout-Waldron as one of its project engineers.

Illinois Poultry Day All-Industry Affair

URBANA—A program packed with topics designed to touch on current problems and developments in all phases of the poultry business has been planed for Illinois' all-industry poultry day July 29 at the University of Illinois.

L. E. Card, head of the animal science department, will welcome poultrymen and set the stage for the day's program, which begins with registration at 9 a.m. Sessions begin at 9:30 in Room 112, Gregory Hall.

Topics scheduled for discussion include the pros and cons of grit for broilers; evaluating quality of protein; production control as a way to poultry profits; fat tolerance of chicks; eating eggs and their relation to heart disease; values of soybean meal; trials and tribulations of the diagnostic laboratory; 1957 poultry legislation; and the declining layer hen population in the Corn Belt.

Speakers will include university staff members from the departments of animal science, agricultural economics and food technology, College of Veterinary Medicine and guests from industry.

There will also be a question period from the floor. After the formal sessions, visitors will tour the university poultry farm and have a broiler barbecue sponsored by the Illinois Poultry Improvement Assn.

Anyone interested in any phase of the poultry business is invited to attend the event.

American Cyanamid Names Poultry Head

NEW YORK, N. Y.—Dr. L. M. Skamser, poultry director for the eastern seaboard, has been named director of poultry development of American Cyanamid Co.'s farm and home division, A. B. Clow, division general manager, has announced.

Prior to joining American Cyanamid in 1951, Dr. Skamser lived in Minnesota where he practiced veterinary medicine. In addition to his large animal practice, he also conducted a poultry diagnostic laboratory.

Frank L. Riley

Frank L. Riley Named To Dodgen & Co. Post

KANSAS CITY — Frank L. Riley has been appointed sales promotion manager of the Mix-o-vater Division, Dodgen & Co., Fort Dodge, Iowa, according to an announcement by John Dodgen, vice president of the firm.

Mr. Riley, who has 25 years' experience in the feed industry, will be responsible for dealer promotion and product education for the new Dodgen equipment for portable farm mixing. He will work with the company's distributors and salesmen.

Mr. Riley, who has been associated with his brother J. H. Riley in the Riley Feed Co., Kansas City, will move to Fort Dodge, Iowa.

SELLS MILL EQUIPMENT

IDAHO FALLS, IDAHO—Rogers Brothers Seed Co. of this city has sold its feed mill equipment to the Jack Thomas Grain & Livestock Co. Mr. Thomas has started work on a building in which to house pellet machinery purchased in the deal. Equipment will be modified for automatic operation. Both prepared pellets and custom processed feed for farmers will be turned out.

CAPITAL COMMENT

By John Cipperly

WASHINGTON—Responding to a request from Congress for a report on feed grain price support, the Secretary of Agriculture, Ezra Taft Benson, fired back a full blast recommending that Congress remove corn as one of the basic commodities and give to the Secretary full discretionary authority to support feed grains between 0 and 90% of parity.

This report to Congress is seen as little more than a gesture unlikely to gain more than angry opposition from the splintered farm bloc of both Republicans and Democrats who, incidentally, hardly speak to one another. That is how bad the legislative situation on the farm problem is.

In this report the Secretary speaks as he has many times before that he believes all feed grains must be wrapped under the same common tent as far as price supports are concerned and that corn must be removed from the favored class as a basic commodity. He would like to have it placed with sorghums, oats and barley as a feed grain, price supported on a proportionate basis of feeding value with those other crops.

On his departure from the USDA, Lloyd Case, former director of the grain branch, submitted a statement to USDA and to Sen. George D. Aiken (R., Vt.), that the present attitude toward farm problems failed to reflect a basic idea that field grain crops should be studied and considered as separate commodity groups.

The Case views are seen as having been read in feed trade circles. It now becomes evident that sorghum grains are rapidly becoming a competitor of corn in the Corn Belt states. Also, as the conservation reserve program of the soil bank takes hold—and it may become a fixed adjunct of the farm program—pasture or grassland farming cannot be rejected as an important factor for the feed industry to consider in the dairy and livestock economy.

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LA CROSSE MILLING PLANT—Shown here is the new processing plant of the LaCrosse Milling Co., Cochrane, Wis. The plant is designed for processing oats and barley and replaces the mill destroyed by fire in 1956.

La Crosse Milling Begins Operations At New Plant

COCHRANE, WIS.—The new, 300-ton-per-day processing plant of the La Crosse Milling Co., Inc., Cochrane, Wis., was expected to be in operation about July 20, according to Jay Martin, general manager. A $400,000 fire destroyed the original plant on Nov. 19, 1956.

Mr. Martin designed the mill, and construction was started on March 1 by Olson Elevator & Mill Supply, North Mankato, Minn.

More than 6,000 sq. ft. of space is provided by the plant, which is constructed of wood and concrete with an ironclad exterior.

The plant has storage facilities for 200,000 bu. of grain. Twenty-four bulk bins equipped with Draver percentage feeders each have 3,000 bu. capacities.

Five Jacobson 100-h.p. hammer mills fitted with automatic feeders are housed in the basement. Eight elevator legs, a feed conditioner and 14 screw conveyors, all furnished by Strong-Scott, have been installed. Other equipment includes a huller and roller mill supplied by Roskamp, a Day Co. bulk car loading system, an A. T. Farrell Clipper grain cleaner, a Wenger horizontal cooler and a Preston Iron Works car unloader.

A Day Co. system has been installed for dust control. A conveyor moves bags from a Richardson automatic packing scale to the railroad siding.

The mill will turn out two additional products—steam-rolled barley and steam-rolled oats—when operations resume, Mr. Martin said. The mill had formerly produced pulverized oats and barley, steam crimped oats and screenings. No finished feeds are manufactured at the plant.

Mr. Martin founded the firm in 1945. It was incorporated on May 1, 1957. LaCrosse Milling products are distributed in 25 states, said Mr. Martin.

Several other mills have helped the company supply customers during the rebuilding period, according to Herb Kelm, sales manager. Bill Powell is mill foreman.

Dr. Harold D. Hutchinson

MOORMAN'S RESEARCH — Swine nutrition research will be the main area of work for Dr. Harold D. Hutchinson, in his new position on the 30-member research staff of the Moorman Mfg. Co., Quincy, Ill. After receiving his bachelor's degree from Queen's University at Belfast, Ireland, Dr Hutchinson entered the University of Illinois on a Fulbright scholarship and received his Ph.D. degree there in June, in swine nutrition.

Haynie Menhaden Names Dr. T. L. Meade

WILDWOOD, N. J. — Dr. Thomas L. Meade has been named a vice president and director of research of Haynie Menhaden Products, Inc., Wildwood, N. J., announces R. L. Haynie, Jr., president.

Dr. Meade, formerly supervisor of quality control for New Jersey Menhaden Products, Inc., a producing firm for Haynie Menhaden Products, is the developer of an antioxidant process in the production of menhaden fish meal products, a process used in Haynie's Hi-Seas stabilized menhaden whole meal and Hi-Seas menhaden fish meal.

The appointment follows by a few weeks the consolidation under the Haynie Menhaden Products supervision of the research, quality control and product development of New Jersey Menhaden Products, Inc., Mississippi Menhaden Products, Inc., and Virginia Menhaden Products, Inc.

Assisting Dr. Meade will be Dr. Russell T. McIntyre, former professor at Louisiana State University, who joined Haynie earlier this year. Research headquarters will be at the firm's new central research and control laboratory in Wildwood.

Midsouth Shippers Set Annual Meeting

MEMPHIS — The annual meeting of the Midsouth Soybean & Grain Shippers Assn. will be held Aug. 6-7 at the Hotel Peabody here. The meeting will start with a cocktail party, buffet supper, floor show and dance at 6:30 p. m. Aug. 6.

The regular meeting will be held Aug. 7. Registration fees for the dinner and meeting total $10.

Paul C. Hughes, Blytheville, Ark., secretary of the group, said a good program is planned, and everyone will have a chance to express his opinions.

Poultry Fatty Acids Found to Benefit Cholesterol Levels

CHICAGO — Turkey and chicken fats contain the type of fatty acid composition which has been shown to have a beneficial effect on the cholesterol levels in the blood, Dr. M. L. Scott, professor of nutrition, Cornell University, pointed out recently.

Speaking at a luncheon for 50 food publicity leaders in the Chicago area at the Conrad Hilton hotel, Dr. Scott said that the type of fat—saturated or unsaturated—in the diet has an important bearing on the level of cholesterol in the blood. When the blood cholesterol level is high, it is considered a danger signal in the diagnosis of heart disease.

He said that the problem is to reduce the high level of cholesterol in the blood and that this can be done with the ingestion of unsaturated fats.

"Fortunately, turkey is very high in unsaturated fatty acids," he said.

The high protein-low fat content of turkey will be emphasized in the 1957 midsummer turkey merchandising and promotion theme, "Turkey Charts the Course to Better Nutrition."

The theme was introduced at the luncheon which was sponsored by the National Turkey Federation and the Poultry & Egg National Board as a tuneup for the nationwide promotion of midsummer turkey time, July 25-Aug. 4.

Dr. Scott developed the following significant points in his talk:

1. Diets low in fat decrease the levels of blood cholesterol, and turkey and chicken are low in fat content.

2. Starting with a low-fat diet, the addition of fats containing a high proportion of unsaturated fatty acids does not cause any change in the blood cholesterol.

3. The addition of fats containing a high proportion of saturated fatty acids causes a prompt and marked rise in blood cholesterol.

4. When blood cholesterol is high, it can be reduced with the ingestion of unsaturated fats.

5. Turkey is higher in protein content than any of the other common animal foods.

6. The combination of high-protein and low-fat content in turkey is important in controlling weight. When more of the total calories come from protein, the tendency of the over-all diet to produce fat is lessened.

M. C. Small, executive secretary-treasurer of the National Turkey Federation, told the food publicists that supplies of turkeys for consumers are at an all-time high and that it is to the advantage of consumers everywhere to buy turkey.

The group was served six different turkey and egg recipe dishes which originated in the home economics department of the Poultry and Egg National Board.

Feed Men to Honor Dr. Gus Bohstedt

MILWAUKEE — Dr. Gustav Bohstedt, who has retired from active work and is now professor emeritus at the University of Wisconsin, will be honored at the Wisconsin Nutrition School for Feed Men, to be held Aug. 19-20 at the university at Madison.

Eldon H. Roesler, executive secretary of the Central Retail Feed Assn., Milwaukee, said that there will be a special program at the nutrition school banquet to honor Dr. Bohstedt for his work as "father" of the nutrition school.

A gift will be presented to Dr. Bohstedt at the banquet. Anyone wishing to contribute to this may send a check—made out to "Bohstedt Fund —Central Retail Feed Assn."—to the association at 1712 W. St. Paul Ave., Milwaukee 3, Wis.

Feeder Cattle at Highest Price Levels Since 1952

URBANA, ILL. — Cattle feeders soon may be making decisions to buy or not to buy the highest priced feeder cattle since 1952, Prof. L. H. Simerl pointed out recently.

Prof. Simerl, agricultural economist at the University of Illinois, noted that stocker and feeder steers at 10 leading markets recently sold at around $20 cwt., which was nearly $4 more than a year ago and nearly $7 more than in mid-1953. It's necessary to go back five years to find so high a price this late in the year.

It now appears, said Prof. Simerl that this may be the best year for feeder cattle producers since 1952. Most areas have had more rain than in the past four or five years, and the average price of feeder cattle has moved from around $17 to $20 in recent weeks. Of course, he said, calves and the higher quality older cattle will sell for considerably more than the average price.

Prof. Simerl said the rise in feeder cattle prices was caused by two things: (1) Prices of fed steers have been $2 to $4 cwt. higher this year than in 1956, and (2) ending of the drouth in the central and southern Great Plains created a strong demand for cattle for grazing and restocking the ranges.

Average monthly prices of feeder steers (at Kansas City) have been over the $20 level for a few months in the spring every year since price ceilings were removed in 1946—except last year, when the monthly average was between $17 and $18 all year.

Prices of stocker and feeder cattle usually decline 15 to 20% from a spring high to a fall low. The lower grades drop more than the higher ones, and older cattle more than calves.

MARKETS

(Continued from page 2)

The third quarter of the year is starting slowly, observers say, and the second quarter saw a smaller volume of feeds move than for the same period in 1956.

The major problems seemed to be the poor returns feeders are receiving. Also, pastures were seasonally good, which permitted grazing and cutting corners on feeding.

The major topic of conversation in this area this week was the deluge which struck Chicago and the metropolitan area on the evening of July 12. A record amount of rainfall for a 24-hour-period—more than six inches—flooded low areas and viaducts, filled basements, and generally disrupted normal activities for a few days.

Some feed mills in the Chicago area sustained some loss, inconvenience or running time. One large plant ran at 50% capacity during the past week while a generator was being repaired.

California

The distribution of laying mash was holding up fairly well and turkey feeds were moving in good volume. The weather has been on the warm side throughout the day but with cool mornings and evenings.

Egg prices advanced again July 17 with an increase of 2¢ on large eggs and 1¢ on mediums. The market looked more promising especially with eastern markets tending to hold their earlier gains. While egg sales were not brisk, still there was no surplus accumulating.

Fryer prices were a little firmer but the turkey situation was very unsettling with a large crop coming on and heavy cold storage stocks.

The cattle market was fairly active early in the week with prices

generally 25@75¢ higher. By the middle of the week prices had settled back a little but there was a good steady demand for both steers and heifers. One load of steers sold July 17 at $25.75 which is the highest price in this market since October, 1954.

Prices on grains and feed ingredients were generally unchanged to somewhat easier with one or two exceptions such as barley at $1 ton higher and soybean meal at $2 ton up. Buyers still contracted for supplies on a strictly hand-to-mouth basis.

Pacific Northwest

Feed mixers reported a continued good movement of chick and egg mashes in the face of strong to higher prices for eggs and frying chickens. Although turkey producer paying prices were at a new recent low and around 10¢ lb. lower than one year ago, there is a dependable demand for poult feeds.

Prices for raw ingredients averaged lower with further declines noted for wheat millfeeds, molasses beet pulp and fish meal. The exception to this trend was a $3 ton soybean meal price boost.

Feed grain prices held steady with alfalfa hay listings barely unchanged and readily available at $26, f.o.b., Portland and Seattle, baled.

The demand for formula dairy feeds continued slow with manufacturers explaining that a number of combined factors were responsible for this. They point to better than average pasture and range conditions throughout the Pacific Northwest, along with relatively cheap prices and large stocks of feed grains and hay.

Most formula feed prices were at the bottom of the week's range and declines were checked by the rather sharp soybean meal market advance.

Portland egg prices to producers advanced 2¢ doz. for large eggs and 1¢ for mediums during the past week while fryer prices were unchanged to 1¢ up.

Most egg buyers quoted producers a 40-43½¢ doz. price for AA large eggs, f.o.b., Portland with A large offerings at 36-40½¢ and A mediums at 32-34½¢ doz. A small eggs held unchanged at 21-24½¢.

No. 1 grade fryers brought growers mostly 24¢, f.o.b. Portland processing plants.

Mountain States

Feed sales continued at a slow pace during the past week. Buying of feed and feed ingredients were cautious and on a "as needed" basis. Most feed buyers seemed to expect prices to be lower as feed grain prospects looked very favorable.

Good pasture and hay is holding a lot of livestock on the ranches and not much supplemental feeding is being done.

Turkey feed is moving well as the birds grow larger. The broiler and egg market still seems to hold back much encouragement to expand in these operations.

Northeast

In general, running time of feed mills was curtailed during the past week to 36 hours instead of the usual 40.

Egg mashes, growing feeds and turkey and broiler feeds comprised the bulk of the week's turnover.

Egg prices held firm with large and extra large white eggs up 1¢ doz. In Buffalo large and extra large white eggs ranged from 42@48¢ doz., mostly 47¢. Broilers and fryers held steady at 23-24¢ lb. Prices were holding well and this was encouraging to feed men.

Milk prices in June were 20¢ above a year ago and about 5¢ over the preceding month.

Most grains were unchanged with corn being down 1@1½¢ bu. from last week.

The millfeed picture was scrambled with flour mills running on an average of five to six days, unchanged from last week. There was nothing heavy doing in the mixer business and prices remained unchanged with sales on the slow side. Running time was from 4-4½ days. Pastures were in excellent condition.

Bran was down 50¢, middlings were unchanged and red dog was down $1 from last week.

Ohio Valley

Improvement noted last week in sales of formula feeds continued during the past week, and put manufacturers in a much better frame of mind than had been the case for many months. "Maybe it's only a flash in the pan," one of them remarked, "but it's mighty nice while it lasts."

But there appeared to be a sound basis for the upswing in feed sales, and an equally sound basis for the belief that business during the weeks ahead will be considerably better than anyone had thought likely.

Perhaps most important have been the almost unanimous predictions of good over-all business during this year's second half, with these predictions being supported in this area by continuing business prosperity at a high level. Farmers appear to keep abreast of over-all business trends just as much as they do of trends in prices of, and demands for farm commodities, and it now appears that any fears they may have had of an economic recession have been pretty well dissipated.

Demands in this area for eggs and meats are in such volume so as to justify considerable expansion of farm flocks and herds, many feed men feel. Egg prices were firmer and good quality eggs were scarce. Hog prices were 25@50¢ higher, and cattle and sheep prices were steady to higher.

With this situation prevailing during the height of the midsummer vacation period, it is to be expected that retail demands for all farm products will increase considerably with the arrival of cooler weather.

A pleasing aspect of the week's formula feed business was the considerable increase in sales of dairy feeds and egg mashes, although the entire list moved up volume-wise. As a result, virtually all area mills are presently being operated on full five-day schedules with increased personnel. Formula feed prices were steady to up 50¢ ton.

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